

BIBLIOGRAFIA INTERNACIONAL DE SÊMEN DE BOVINOS

Empresa Brasileira de Pesquisa Agropecuária. Unidade de Execução de Pesquisa de Âmbito Estadual de São Carlos, São Paulo.

Bibliografia internacional de sêmen de bovinos, por Regina Célia Pisanelli de Ruzza, Manfred Bugner e Francisco José de Ruzza. São Carlos, EMBRAPA/DID, 1983.

571 p.

1. Bovino - sêmen - bibliografia internacional.
2. Animal - inseminação - bibliografia internacional. I. Ruzza, R.C.P.de, colab. II. Bugner, M., colab. III. Ruzza, F.J.de, colab. IV. Título

CDD 636.082.45016

c EMBRAPA, 1983

**EMPRESA BRASILEIRA DE PESQUISA AGROPECUÁRIA -
EMBRAPA**

**Unidade de Execução de Pesquisa de Âmbito Esta-
dual de São Carlos - UEPAE de São Carlos**

BIBLIOGRAFIA INTERNACIONAL DE SEMEN DE BOVINOS

Regina Célia Pisanelli de Ruzza
Bibliotecária

Manfred Bugner
Médico Veterinário

Francisco José de Ruzza
Técnico Agrícola

Departamento de Informação e Documentação
Brasília

1983

Pedidos desta bibliografia, bem como cópia dos artigos nela indexados deverão ser feitos à:

EMBRAPA

UEPAE de São Carlos

Rodovia Washington Luiz, 234

Caixa Postal - 339 - Telefone (0162) 71 1265, 71 6123

13.560 - São Carlos - SP

ou

Pedidos de exemplares desta bibliografia, também poderão ser feitos ao:

Departamento de Informação e Documentação - EMBRAPA

Edifício Venâncio 2000 - 2º Subsolo

Caixa Postal - 11.1316

70.333 - Brasília - DF.

SUMÁRIO

APRESENTAÇÃO	9
PREFÁCIO	11
INTRODUÇÃO	15
ALTERAÇÕES DO ESPERMATOZÓIDE	19
AVALIAÇÃO E QUALIFICAÇÃO DO SÊMEN	43
CARACTERÍSTICAS MORFOLÓGICAS DO ESPERMATOZÓIDE	79
COMPOSIÇÃO QUÍMICA DO SÊMEN	93
DILUENTES E DILUIDORES	117
ESTOCAGEM DO SÊMEN	169
FATORES QUE AFETAM NA PRODUÇÃO DO SÊMEN	199
GERAL	221
METABOLISMO DO ESPERMATOZÓIDE	259
MICROBIOLOGIA DO SÊMEN	279
SÊMEN IN VITRO	311
ÍNDICE DE AUTORES	347
ÍNDICE DE ASSUNTOS	409
ÍNDICE GEOGRÁFICO	563
ANEXO I	
Tabela 1 — Tipos de publicações e percentagem	567
Tabela 2 — Ano de publicação, n.º de trabalho e percentagem	568
Tabela 3 — Campos de pesquisa mais estudados e percentagem	569

Tabela 4	— Tipos de autoria e percentagem.	570
Tabela 5	— Nomes de autores que mais produziram trabalhos.	571
Tabela 6	— Títulos dos periódicos que mais veicularam o assunto.	572

APRESENTAÇÃO

A EMBRAPA, representada pela Unida de de Execução de Pesquisa de Âmbito Estadual de São Carlos - UEPAE de São Carlos, através do Setor de Informação de Documentação (SID), lança mais es te valioso trabalho "Bibliografia Internacional de Sêmen de Bovino", que se destina a todas as pessoas, direta ou indiretamente, interessadas na melhoria do rebanho bovino no Brasil pela inseminação artificial.

A presente publicação é de vital importância para o processo de desenvolvimento da pesquisa e da tecnificação da agropecuária brasilei ra, sobretudo por divulgar trabalhos de pesquisa realizados em diferentes regiões e países, os quais, se publicados apenas na forma original, dificilmen te chegariam a todo público interessado.

Outrossim, é um exemplo elucidati vo das grandes conquistas da pesquisa agropecuária, que mostra a viabilidade de se poder elevar de deze nas a milhares de descendentes de um reprodutor de 'alta qualidade a diferentes partes do mundo ao mes mo tempo, sendo êle criado e manejado comodamente

em um único local ou mesmo morto. Mais do que isso, são pesquisas técnico-científicas hoje transformadas em tecnologia utilizada nos países desenvolvidos e que deve ser amplamente difundida nos países em desenvolvimento. Este é mais um exemplo de investimento na pesquisa com retorno imensurável.

Em nome de Regina Célia Pisanelli de Ruzza, Manfred Bugner e Francisco José de Ruzza, agradecemos a todos que contribuíram para a concretização de mais este trabalho em prol da agropecuária brasileira.

Fábio Teotônio Teixeira de Oliveira
Chefe da UEPAE/São Carlos

PREFÁCIO

Foi em 1776 que o fisiologista italiano Lazzaro Spallanzani realizou a "fecundação instrumental" de uma cadela. O relatório que ele apresentou, constituiu a primeira publicação oficialmente registrada, relacionada à Inseminação Artificial. Mais de cem anos se passaram até que novas tentativas fossem coroadas de sucesso, por alguns veterinários franceses, ao trabalharem com êguas. Por volta de 1920, desenvolveram-se experimentos de Inseminação em todas as espécies de animais, sobretudo na Rússia. Todavia as técnicas utilizadas não saíram do estado experimental, antes do fim da última guerra mundial.

Lembramos todavia, que a primeira Cooperativa de Inseminação Bovina foi criada na Dinamarca em 1936, a segunda nos E.U.A, em 1939 e a terceira na Inglaterra durante 1940/41. Devido à guerra, a França iniciou suas atividades somente em 1946, mas com desenvolvimento considerado o mais rápido do mundo e hoje todas as vacas leiteiras são inseminadas artificialmente.

De caráter "artesanal" até os anos de 1960, a Inseminação Artificial devia adquirir um aspecto verdadeiramente "industrial". Deve-se dizer que as possibilidades oferecidas pela congelação do sêmen, graças ao emprêgo do Glicerol abriram novo campo de ação absolutamente extraordinário: estas possibilidades já percebidas pelo francês ROSTAND, em 1946 (com sêmen de rã) e concretizadas em 1949 pelos ingleses POLGE, SMITH e PARKES (com sêmen de touro) iam literalmente revolucionar as técnicas da reprodução animal. Hoje em dia, praticamente só se utiliza sêmen congelado nas Centrais de Inseminação.

Com o passar dos anos, as publicações que se referem à Inseminação Artificial e em particular à Inseminação Bovina, se multiplicaram no mundo todo, e seu número tornou-se considerável. Os resultados dos pesquisadores dizem respeito, entre outros, à produção do sêmen (puberdade, espermatogênese, influência da nutrição, etc...); às técnicas de coleta (vagina artificial, eletroejaculação, massagem das ampolas dos canais diferentes); ao comportamento sexual do touro; à tecnologia do sêmen sob todas as suas formas (diluição, condicionamento: ampolas, pa

lhetas e pellets, congelação, descongelação, est
o
cagem, ã inseminação propriamente dita (estagio'
fisiológico da vaca e momento exato da interven
ç
ção, local de deposição do sêmen e conteúdo em
espermatozôides, etc...) .

Todos aqueles que se interessarem pela
Inseminação Artificial Bovina (professores, pes
quisadores, estudantes e técnicos), encontrarão '
nesta BIBLIOGRAFIA INTERNACIONAL SOBRE SÊMEN BOVI
NO, compilada pelo SID - UEPAE de São Carlos, sub
sídios básicos para o exercício de suas funções.



RAYMOND JONDET

Centre d'Insemination Artificielle
Rennes - França

Consultor da FAO de julho/set.1981.

Na EMBRAPA/UEPAE DE SÃO CARLOS

INTRODUÇÃO

Tomar ciência do que já foi publicado sobre o assunto deve ser o ponto inicial para a realização de qualquer trabalho científico. Assim, a UEPAE de São Carlos, através do SID, lança a sua segunda bibliografia sinalética a nível internacional, agora sobre SÊMEN DE BOVINO, que compreende 1507 referências.

Com pesquisas retrospectivas de 1856 a 1981, o presente levantamento segue as normas padronizadas pela ABNT (Associação Brasileira de Normas Técnicas).

Seu arranjo segue a 11 subdivisões de classificações do assunto:-

- Alterações do espermatozôide;
- Avaliação e qualificação do sêmen;
- Características morfológicas do espermatozôides;
- Composição química do sêmen;
- Diluentes e diluidores;
- Estocagem do sêmen;
- Fatores que afetam na produção do sêmen;
- Geral;
- Metabolismo do espermatozôide;
- Microbiologia do sêmen;

- Sêmen in vitro, e dentro de cada uma de las, ordem alfabética de autor.

Com o objetivo de esclarecer o assunto e in dicar rapidamente a informação desejada, foram adota dos os Índices de autor e assunto.

Duas observações foram levadas a efeito na confecção do Índice de assunto:

- Foi usado PRESERVAÇÃO para CONSERVAÇÃO, reunindo assim na primeira, todos os trabalhos sobre os 2 assuntos, embora destacamos aqui a diferença en tre ambas, PRESERVAÇÃO= estocagem do sêmen por tempo indefinido; CONSERVAÇÃO= estocagem do sêmen por pou cas horas.

- Há necessidade de se esclarecer o que foi tomado como DILUENTE= termo usado para um sô com ponente; DILUIDOR= termo usado para 2 ou mais comp nentes.

Exemplo:-

CITRATO = Diluente

CITRATO + GEMA = Diluidor

Fizemos análise quantitativa da bibliografa e apresentamos os resultados nas tabelas que fa zem parte do anexo 1 no final do trabalho, são elas:

tabela 1:- Tipos de publicações e percentagem

tabela 2:- Ano de publicação, nº de trabalho e per
centagem

tabela 3:- Campos de pesquisa mais estudados e per
centagem

tabela 4:- Tipos de autoria e percentagem

tabela 5:- Nomes de autores que mais produziram tra
balhos

tabela 6:- Títulos dos periódicos que mais veicula
ram o assunto

Os agradecimentos sempre são falhos, mesmo assim queremos estendê-los ao Dr. Antonio Junqueira Tambasco, ex-Chefe desta Unidade, pelo grande incentivo na realização de todos os trabalhos desenvolvidos pelo SID; Silvia Regina Galhardo e Tereza Cristina Domingos de Oliveira, estagiárias de Biblioteconomia e Documentação, pela ajuda na elaboração dos Índices; Maria Cirlei Merloti pela datilografia dos originais e àqueles que, de alguma forma, auxiliaram no preparo desta bibliografia.

Os Autores

ALTERAÇÕES DO ESPERMATOZÓIDE

0001. ALMIQUIST, J.O. Effect of cold shock after thawing on acrosomal maintenance and motility of bull spermatozoa frozen in plastic straws. A.I. Digest, 24: 17, 1974.
0002. AMAN, R.P. & GRIEL, L.C. Fertility of bovine spermatozoa from Rete testis, Cauda epididymides, and ejaculated sêmen. J. Dairy Sci., 57: 212-9, 1974.
0003. AUGLEY, E. & RENTON, J.P. Abnormal spermatozoa in a Ayrshire bull. Vet. Rec., 82: 129-31, 1968.
0004. BALL, L.; GRINER, L.A. & CARROL, E.J. The bovine seminal vesiculitis syndrome. Am. J. Vet. Res., 25: 291-302, 1964.
0005. BALL, L.; YOUNG, S. & CARROL, E.J. Seminal vesiculitis syndrome: lesions in genital organs of young bull. Am. J. Vet. Res., 29: 1173-84, 1968.

0006. BANE, A. & NICANDER, L. Pouch Formations by invaginations of the nuclear envelope of bovine and porcine sperm as a sign of disturbed spermatogenesis. Nord. Vet. Med., 17: 149, 1965.
0007. BARRON, N.S. & HAQ, I. Ammorium urate in the sēmen of bulls with testicular hypoplasia. Vet. Rec., 60: 155-6, 1948.
0008. BEDFORD, J.M. Sperm capacitation and fertilization in mammals. Biol. Reprod., 2: 128-58, 1970.
0009. BIALY, G. & SMITH, V.R. Cold shock of epididymal spermatozoa. J. Dairy Sci., 42: 2002, 1959.
0010. BLOM, E. Medusa formation in bull and stallion sēmen and their diagnostic significance. Scand. Vet. Tidsker., 37: 257-85, 1947.

0011. BLOM, E. A new sperm defect pseud-droplets in the middle piece of the bull sperm. Nord. Vet. Med., 20: 279, 1968.
0012. BLOM, E. A new sterilising defect (dag defect) located in bull sperm tail. Nature, London, 209: 739-40, 1966.
0013. BLOM, E. On the occurrence in bull sperm of certain "medusa formations" derived from the epithelium of the efferent ducts of the testis. Acta Path. Microbiol. Scand., 21: 713-20, 1944.
0014. BLOM, E. A rare sperm abnormality corkscrew sperms associated with sterility in bulls. Nature, London, 183: 1280-1, 1959
0015. BLOM, E. Spontaneous detachment of the Ga
lea capitis in spermia of bull and stallion. Skand. Vet. Tidiskr., 35: 779-89, 1945.
0016. BLOM, E. A sterilizing tail sperm defect in a Holstein Friesian bull. Nord. Vet. Med., 28: 295, 1976.

0017. BLOM, E. The ultrastructure of some characteristic sperm defects and a proposal for a new classification of the bull spermogram. Nord. Vet. Med., 25: 383, 1973.
0018. BLOM, E. The ultrastructure of the Pseudodroplet: defect in the bull sperm. In: CONGR. INTERN. REPROD. ANIM. INSEM.ARTIF., 1., Paris, 1968. p. 117-9.
0019. BLOM, E. The ultrastructure of sterilizing Knobbed sperm defect in bull. Nature, London, 194: 989-90, 1962.
0020. BLOM, E. & BIRCH-ANDERSEN, A. Ultrastructure of the decapitated sperm defect in Guernsey bulls. J. Reprod. Fert., 23: 67-72, 1970.
0021. BLOM, E. & BIRCH-ANDERSEN, A. The ultrastructure of a new hereditary sterilizing defect (the dag defect) in the sperm bull tail. In: WORLD CONGR. FERT. STER., 5., 1966. Proceedings.

0017. BLOM, E. The ultrastructure of some characteristic sperm defects and a proposal for a new classification of the bull spermogram. Nord. Vet. Med., 25: 383, 1973.
0018. BLOM, E. The ultrastructure of the Pseudodroplet: defect in the bull sperm. In: CONGR. INTERN. REPROD. ANIM. INSEM.ARTIF., 1., Paris, 1968. p. 117-9.
0019. BLOM, E. The ultrastructure of sterilizing Knobbed sperm defect in bull. Nature, London, 194: 989-90, 1962.
0020. BLOM, E. & BIRCH-ANDERSEN, A. Ultrastructure of the decapitated sperm defect in Guernsey bulls. J. Reprod. Fert., 23: 67-72, 1970.
0021. BLOM, E. & BIRCH-ANDERSEN, A. The ultrastructure of a new hereditary sterilizing defect (the dag defect) in the sperm bull tail. In: WORLD CONGR. FERT. STER., 5., 1966. Proceedings.

0022. BLOM, E. & BIRCH-ANDERSEN, A. Ultrastructure of the "Knobbed sperm" defect in the bull. Nature, London, (4832): 989-90, 1962.
0023. BLOM, E. & CHRISTENSEN, N.O. The etiology of spermiostasis in the bull. Nord. Vet. Med., 12: 453, 1960.
0024. BROCHART, M. Origin of half-stained spermatozoa obtained from livedead differentiating stains. Proc. Soc. Stud. Fertil., (5): 82-6, 1954.
0025. CHANG, M.C. A detrimental effect of seminal plasma on the fertilizing capacity of sperm. Nature, London, 179: 258-9, 1957.
0026. CHENOWETH, P.J. & BURGESS, G.W. Mid-piece abnormalities in bovine semen following ephemeral fever. Aust. Vet. J., 48 (1): 37-8, 1972.
0027. CHOONG, C.H. & WALES, R.G. The effect of cold shock on spermatozoa. Aust. J. Biol. Sci., 15: 543-51, 1963.

0028. CHURCH, K.E.; CHAVES, C.N. & MACLEOD, R. UI
trastructure of cold shocked bovine sperm.
J. Anim. Sci., 41: 346, 1975.
0029. COLLERY, L. Note on the physiology of the mam
malian epididymis and spermatozoon. Proc.
R. Irish Acad., 49: 213-23, 1944.
0030. COUBROUGH, R.I. & BARKER, C.A.V. Spermatozoa:
an unusual middlepiece abnormality associa
ted with sterility in bulls. In: INTER.
CONGR. ANIM. REPROD., 5., Trento, 1964 .
Proceedings. p. 219-29.
0031. COULTER, G.H.; OKO, R.J. & COSTERTON, J. W.
Incidence and ultrastructure of "crater"
defect of bovine spermatozoa. Theriogeno
logy, 9 (2): 165-73, 1978.
0032. CRAN, D.G. & DOTT, H.M. The ultrastructure
of knobbed bull spermatozoa. J. Reprod.
Fert., 47: 407-8, 1976.
0033. CUPPS, P.T. & BRIGGS, J.R. Changes in the
epididymis associated with morphological
changes in the spermatozoa. J. Dairy Sci.,
48: 1241, 1965.

0034. DESHPANDE, B.R.; HUKERI, V.B. & VELHANKAR, D.P.
Study of seminal attributes in a Holstein Friesian bull associated with partial testicular hypoplasia. Indian Vet. J., 53 (6): 408-13, 1976.
0035. DONALD, H.P. & HANCOCK, J.L. Evidence of a gene controlled sterility in bull. J. Agric. Sci., 43: 178, 1953.
0036. FEJES, J. Degree of acrosomal destruction after the deep freezing of bull sēmen in liquid nitrogen. Veterinarstvi, 25 (9): 409-12, 1975.
0037. FRIEND, D.S. & FAWCETT, D.W. Membrane differentiations in freeze-fractured mammalian sperm. J. Cell. Biol., 63: 641-64, 1974.
0038. GAMCIK, P. Sterility of bulls caused by vesicular deformations on the acrosome of the spermatozoa. Folia Vet., 11 (2): 131-2, 1967.

0039. GANGULI, N.C. & KAKAR, S.S. Status of acrosomal hyaluronidase in cattle sēmen during preservation. Zentralbl. Vet. Med. Reihe., A., 27 (3): 221-7, 1980.
0040. GARCIA, O.S. Aspēctos patolōgicos do sēmem de touros. In: SIMPÓSIO NACIONAL DE REPRODUÇÃO ANIMAL, 1., Belo Horizonte, 19-23 ago., 1974. Anais. p. 31-48.
0041. GARCIA, O.S. Características físicas e morfológicas do sēmen de touros normais e de touros com distúrbios reprodutivos, de raças Européias, Indianas, criadas no Estado de Minas Gerais. Belo Horizonte, UFMG, 1971. Tese de Mestrado.
0042. GERBER, L.E. & SAACKKE, R.G. Seminal plasma and freese-thaw injury of sperm. J. Anim. Sci., 35: 242, 1972.
0043. GLEDHILL, B.L. Enigma of spermatozoal deoxyribonucleic acid and male infertility: a review. Amer. Vet. Res., 31 (3): 39, 1970.

0044. GLEDHILL, B.L.; GLEDHILL, M.P.; RIGLER JUNIOR, R. & RINGERTZ, N.R. Atypical changes of deoxyribonucleoprotein during spermiogenesis associated with a case of infertility in the bull. J. Reprod. Fert., 12: 575, 1966.
0045. GLOVER, T.D. Disintegrated spermatozoa from the epididymis. Nature, London, 19: 185-6, 1961.
0046. GOFFAUX, M.; PAREZ, M.; THOM-ASSEY, M. & VUIDEPOT, R. Effects of two years storage on the motility and fertilising ability of bull semen. Elév. Insemin., (92): 3-7, 1966.
0047. GUSTAFSSON, B. A case of akinisia of bull sperm associated with a functional disturbance in the epididymis. Nord. Vet. Med., 17: 65, 1965
0048. GUSTAFSSON, B. Diagnosis of primary epididymal dysfunction in the bull. In. INTER. CONGR. ANIM. REPROD. AND A.I., 7., Munich, 1972. p. 765-8.

0049. GUSTAFSSON, B. Luminal contents of the epididymis under conditions of reduced spermatogenesis, luminal blockage and certain sperm abnormalities. Acta. Vet. Scand., 17: 1-80, 1966.
0050. GUSTAFSSON, B.; CRABO, B. & RAO, A.R. Two cases of bovine epididymal dysfunctions. Cornell Vet., 62 (3): 392-402, 1972.
0051. GUSTAFSSON, B.; EINARSSON, S.; NICANDER, L. ; HOLTMAN, M. & SOOSALU, O. Morphological, physical and clinical examination of epididymal contents and sēmen in a bull wity epididymal disfunction. Andrologia, 6 (4): 321. 1974.
0052. HANCOCK, J.L. The spermatozoa of sterile bulls. J. Exp. Biol., 30: 30-56, 1953.
0053. HANCOCK, J.L. & ROLLINSON, D.H.L. A seminal defect associated with sterility of Guernsey bulls. Vet. Rec., 61: 742-3, 1949.

0054. HANCOCK, J.L. & SHAW, I.G. A new difference between live and dead spermatozoa. Nature, London, 176: 260, 1955.
0055. HASSAN, A.G.; BRAUN, J. & LEIDEL, W. Determination and occurrence of protoplasmic droplets in the sēmen of domestic animals. Zuchthygiene, 15 (1): 15-20, 1980.
0056. HESS, E.A.; LUDWICK, T.M.; RICKARD, H.E. & ELY, F. Some of effects of heterospermic processing on sēmen quality and bovine fertility. Fērtīl & Stēril., 9: 238-42, 1958.
0057. JASKOWSKI, L. Deformity of the head of bull spermatozoa associated with sterility. Med. Vet. Warszawa, 15: 760-1, 1959.
0058. JONES, W.A. Abnormal morphology of the spermatozoa in Guernsey bulls. Brit. Vet. J., 118: 257-68, 1962.

0059. KANN, M.L. & ROZE, C. Etude statistique des alterations infrastructurales observées après congélation du spermatozoïde de tau^{re}au: relation avec le pouvoir fécondant. Elev. Insen., 146: 14-25, 1975.
0060. KARRAS, W. Study of spermatozoa. IV. A uni^lateral structure within the middle pie^{ce} of ruminant spermatozoa: its normal and pathological morphology and its func^{tions}. Mh. Tierheilk, 6: 295-312, 1954.
0061. KODAGALI, S.B. & KERUS, U.K. Seminal cha^racters in testis hipoplasia. Indian J. Anim. Health, 92: 209-12, 1968.
0062. KOEFOED-JOHNSEN, H.H. & PEDERSEN, H. Fur^{ther} observations on the "dag defect" of the tail of bull spermatozoa. J. Reprod. Fert., 26: 77, 1971.
0063. KRISHNA RAO, C. Studies on certain factors affecting live and dead differential sperm staining. Vet. Rec., 69: 544-7, 1957.

0064. LAGERLOF, N. Sterility in bulls. Vet. Rec.,
41 (48): 1159, 1936.
0065. LINDAHL, P.E. & KIHLSSTRÖM, J.E. On repening
and agglutination in bull spermatozoa. In:
INTER. CONGR. PHYSIOL. ANIM., 11., Cope
nhagen, 1952. p. 70-4.
0066. MAC MILLAN, E.W. The effects of Interruption
of the vasal and inferior epididymal arte
ries on the cauda epididymidis and testis.
Proc. Soc. Stud. Fertil., 5: 12-9, 1954.
0067. MAC PHERSON, J.W. Fertile bovine semen after
three years storage. J. Amer. Vet. Med.
Assoc., 129: 416, 1956.
0068. MARSHALL, C.E. & SAACKE, R.G. Acrosomal cap
of living bovine spermatozoa. J. Anim.
Sci., 26: 947, 1967.
0069. MATTNER, P.E. Formations and retention of
the spermatozoan reservoir in the cervix
of the ruminant. Nature, London, 212 :
1479-80, 1966.

0070. MC COSKER, P.J. Abnormal spermatozoan chromatin in infertile bulls. J. Reprod. Fert., 18: 363-5, 1969.
0071. MC ENTEE, K. Histopathology of sterility in the bull testicular lesions. In: INTER. VET. CONGR., 16., 1959. Proceedings v.2, p. 933-4.
0072. MUNRO, I.B.; STEWART, D.L. & MELROSE, D. R. Middle piece defect in bovine spermatozoa. Vet. Rec., 73: 577, 1961.
0073. OLAR, T.R.; BECKER, W.C. & SENGHER, P.L. Effect of thawing rate and cold post-thaw temperatures on bovine sēmen packaged in glass ampules. J. Anim. Sci., 44: 95-101, 1977.
0074. ONSTAD, O. Abaksial til-aftning of spermiens mēllhens tykke forbundet med sterilitet hos okse. Nord. Vet. Med., 15: 92-6, 1963.

0075. ORTAVANT, R. A critical phase in maturation of spermatozoa of the bull and ram. C.R. Soc. Biol., Paris, 147: 1552-6, 1953.
0076. OSTASHKO, F.I. & LOPATKO, M.I. Le choc de temperature sur les spermatozoïdes du bélier. In: INTER. CONGR. ANIM. REPROD. AND A.I., 6., 1968. v.2, p. 1623-5.
0077. PELLERZI, A. & CANTONI, M. The interpretation of old concepts relating to the pathology of sperm cells and sēmen evaluation. Riv. di Zootec. Vet. 4: 427-31, 1977.
0078. RAJA, C.D.S.V. & NAMBIAR, K.G. Infertility in a bull due to sperm with abaxial attachment of head and mid-piece. Indian Vet. J., 39: 541-4, 1962.
0079. RAJAMANNAN, A.H.J.; GRAHAM, E.F. & SCHMEHL, M.K.L. Effects of holding on bovine sēmen. A.I. Digest., 9: 6, 1971.

0080. ROB, O. The duration of a decreased fertility in the case of degenerative and inflammatory processes in the testes of breeder bulls. Vet. Med., 13: 247-52, 1968.
0081. ROBBINS, R.K.; GERBER, L.E. & SAACKE, R.G. Influence of thaw rate on maintenance of the acrosomal cap. J. Anim. Sci., 35: 253, 1972.
0082. ROBBINS, R.K.; SAACKE, R.G. & CAHDLER, J.E. Influence of freeze rate, thaw rate and glycerol level on acrosomal retention and survival of bovine spermatozoa frozen in french straws. J. Anim. Sci., 42: 145-54, 1976.
0083. ROLLINSON, D.H.L. Studies on the abnormal spermatozoa of bull sēmen. Brit. Vet. J., 107: 203-14, 258-73, 451-68, 1951.

0084. SAACKE, R.G. & AMAN, R.P. Inherited abnormal acrosomal caps of bull spermatozoa. J. Anim. Sci., 25 (3): 929, 1966.
0085. SAACKE, R.G.; AMAN, R.P. & MARSHALL, C.E. Acrosomal cap abnormalities of sperm from subfertile bulls. J. Anim. Sci., 27: 1391-400, 1968.
0086. SAACKE, R.G. & WHITE, J.M. Acrosomal attachment of freeze-thawed bovine sperm. J. Anim. Sci., 31: 229, 1970.
0087. SAACKE, R.G. & WHITE, J.M. Acrosomal cap maintenance and fertility of frozen bovine semen. J. Anim. Sci., 35: 253, 1972.
0088. SALISBURY, G.W. Aging phenomena in spermatozoa. I. Fertility and prenatal losses with use of liquid semen. J. Dairy Sci., 50 (10): 1675-8, 1967.

0089. SALISBURY, G.W. & FLERCHINGER, F.H. In vi
tro aging of spermatozoa and evidence for
embrionic and early fetal mortality in
cattle. In: INTER. CONGR. ANIM. RE
PROD., 4., The Hague, 1961. p. 601.
0090. SALISBURY, G.W. & MERCIER, E. The reliabi
lity of estimates of the proportion of
morphologically abnormal spermatozoa in
bull sêmen. J. Anim. Sci., 4: 174-8,
1945.
0091. SAVAGE, A. & ISA, J.M. An interesting type
of abnormal bull sperm. Cornell Vet.,
53: 338, 1963.
0092. SCHMEHL, M.K.L.; GRAHAM, E.F. & NELSON, D.
S. Effects of cell concentration and ad
ded bovine spermatozoa. In: INTER. CONGR.
REPROD. ANIM., 9., Span, 16-20 june,
Proceedings. p. 386.

0093. SEKONI, G. & GUSTAFSSON, B. The incidence of sperm abnormalities in dairy bull and effects of age and season. In: INTER. CONGR. REPROD. ANIM., 9., Span, 16-20 June, 1980. Proceedings. p. 284.
0094. SENGHER, P.L.; BECKER, W.C. & HILLERS, J.K. Effect of thawing rate and post-thaw temperature on motility and acrosomal maintenance in bovine semen frozen in plastic straws. J. Anim. Sci., 42: 932-6, 1976.
0095. SENGHER, P.L. & SAACKE, R.G. Serum-induced head-to-head agglutination of bovine spermatozoa. J. Reprod. Fertil., 47: 215-9, 1976.
0096. SJOLLEMA, P. Excentric implantation of the tail in bull spermatozoa. Tijdschr. Diergeneesk., 77: 909-11, 1952.

0097. SLIZYNSKA, H. & SLIZYNSKI, B.M. Cytological studies of sterile bulls with spermhead abnormality. J. Agric. Sci., 43: 253-5, 1953.
0098. SOMADE, B.; MAC PHERSON, J.W. & KING, G. J. Physical damage to the head of bovine spermatozoa induced by processing and freezing. J. Dairy Sci., 57: 625, 1974.
0099. STRIKWERDA, R. Excentric implantation of the tail in bull spermatozoa in relation to fertility. Tijdschr. Diergeneesk., 76: 180-2, 1951.
0100. SZUMOWSKI, P. De quelques effects de plasma seminal frais sur des spermatozoides du sperm de taureau conservé. In: INTER. CONGR. PHYSIOL. PATHOL. REPROD. ANIM. AND A.I., 2, Copenhagen, 1952. v.1, p. 80-6.

0101. TEUNISSEN, G.H.B. Abnormal spermatozoa in a sterile bull. Tijdschr. Diergeneesk., 71: 292-303, 1946.
0102. TEUNISSEN, G.H.B. An abnormality of the acrosome in the spermatozoa of a bull. A.B.A., 15: 34-5, 1946.
0103. TILLMANN, H.; GEHRING, & CZERNICKE, B. Presence de cellules de l'epithelium germinal et de cellules de diverses origines dans de sperme de taureau. Dtsch. Tierarztl. Wschr., 72: 25-8, 1965.
0104. TIMIN, K.S. & PERETURINA, M.F. The influencce of wheat germ on sperm production by bulls. Dokl. Usesoyuz Akad. Sel'Skokhoz Nauk., 6: 17-21, 1941.
0105. UZU, G.; COURTENS, J.L. & COUROT, M. Quantitative analysis of ultrastructural abnormalities of spermatozoa from bulls of different fertility. In: INTER. CONGR. REPROD. ANIM. AND A.I., 8., Cracovie, 1976. p. 748-50.

0106. VALE FILHO, V.R. Disfunção do epidídimo em touros Bos taurus e Bos indicus criados no Brasil. s.n.t.
0107. VALE FILHO, V.R.; MEGALE, F. & GARCIA, O. S. Mitochondrial sheath defects in spermatozoa of a sterile Gyr bulls. In: INTER. CONGR. ANIM. REPROD. AND A.I., 7., 1976. Proceedings. v.5, p. 752.
0108. VANDJUN, C. Kinetics of fertility of sêmen. In: CONGR. INTER. REPROD. ANIM. AND A.I., 5., Trento, 1964. v.4, p. 313-22.
0109. VAN RENSBURG, S.W.J.; VAN RENSBURG, S.J. & de VOS, W.H. The significance of the cytoplasmic droplet in the desintegration of sêmen in Gernsey Bulls. Onderst. J. Vet. Res., 33: 169-84, 1966.
0110. VERES, I. Alterations of acrosomal microstructure of spermatozoa of bovine ejaculates with imperfect freezability. In: INTER. CONGR. ANIM. REPROD. AND A.I., 7., Munich, 1972. p. 262.

0111. VLIET, W.L.V. & HAFEZ, E.S.E. Survival and aging of spermatozoa: a review. Amer. J. Obstet. Gynec., 118: 1006-15, 1974.
0112. WEITZE, K.F.; HOPPE, L.P. & KRAUSE, D. Catheterization of the ductus deferens in bulls for collecting cauda epidymal semen. Berliner und Munchener Tierarztliche Wochenschrift, 90 (8/9): 161-4, 1977.
0113. WELLS, M.E.; BRIGHT, T.L. & HEFLEY, P.J. The effect on freezing and thawing on sperm cell dimensions. Res. Rep. Anim. Breed. Abstr., 43: 1681, 1975.
0114. WIGGIN, H.B. & ALMIQUIST, J.O. Effect of glycerol equilibration time and thaw rate on acrosomal maintenance of bull sperm frozen in plastic straws. J. Dairy Sci., 57: 625, 1974.
0115. WILLIAMS, G. An abnormality of the spermatozoa of some Hereford bulls. Vet. Rec., 77: 1204-6, 1965.

0116. ZIBRIN, M. Ultrastructuralne zmeny akrozómu a mitochondru spermií byka inkubovaných in vitro. Vet. Med., 21: 415-26, 1976.
0117. ZULETA, M.; KOEFOED-JOHNSEN, H.H. & BRESCIANI, J. The dag defect of the tail of the bull spermatozoon: observations with the scanning electron microscope. Copenhagen, Denmark, Institute of Animal Reproduction, Royal Veterinary College, 1978.

AVALIAÇÃO E QUALIFICAÇÃO DO SÊMEN

0118. AALBERS, J.G. Decolorization of methylene blue by bovine spermatozoa and its significance in artificial insemination. Tijdschrift voor Diergeneeskunde, 101 (6): 285-96, 1976.
0119. ABDEL-RAOUF, M. Sexual behaviour and sêmen picture of bulls of the SRB between ages of a 9 and 15 months. Nord. Vet. Med., 17: 318-22, 1965.
0120. DE ABREU, R.M.; BERNDTSON, W.E.; SMITH, V.L. & PICKETT, B.W. Effect of posthaw warning on viability of bovine spermatozoa thawed at different rates in french straws. J. Dairy Sci., 62: 1449-54, 1979.
0121. ADLER, H.C. Microscopic examination of sêmen diluted with cream. Medlemsbl. Danske Dyr lægeforen, 42: 106-7, 1959.

0122. ADLER, H.C.; JESPERSEN, C.; MEDING, J.H. & RA
BECH, N.O. Breeding efficiency of bull sê
men frozen in straws and in pellets. In:
CONGR. INTER. REPROD. ANIM. AND A.I., 2.,
Paris, 1968. v.2, p. 981-3.
0123. ALMIQUIST, J.O. Fertility of frozen sêmen in
creased by new thawing procedure. Advanced
Anim. Breeder, 27: 7, 1979.
0124. ALMIQUIST, J.O. Sperm numbers studied. A.I.
Digest., 25: 7, 1977.
0125. ALMIQUIST, J.O. & HALE, E.B. An aproach to the
measurement of sexual behaviour and sêmen
production of dairy bulls. In: INTER.CONGR.
ANIM. REPROD. AND A.I., 3., Cambridge ,
Proceedings. p. 50-9.
0126. ALMIQUIST, J.O.; ROSEMBERGER, J.L. & BRANAS,
R.J. Effect of thawing time in warm water
on fertility of bovine spermatozoa in plas
tic straws. J. Dairy Sci., 62: 772-5 ,
1979.

0127. AMADOU N'DYAYE, M. Etude des relations entre la qualité et la fécondance du sperme congelé de taureau. Paris, Université Paris, 1976. Tese
0128. AMANN, R.P. Evaluation of spermatozoal motility. Advanced Anim. Breeder, fev., 1978.
0129. AMANN.; HAMMERSTEDT, R.H. & O'CONNOR, M.T. Quantitative evaluation of sperm motility. Pennsylvania, Pennsylvania State University Park, 1979. p. 5-6.
0130. AMERICAN VETERINARY SOCIETY FOR THE STUDY OF BREEDING. A compilation of current information on breeding soundness evaluation, and related subject. Torrington, 1973.
0131. ANDERSON, J. The buffer capacity and the specific gravity of bull semen. J. Agric. Sci., 36: 358-9, 1946.

0132. ANDERSON, J. The examination of sêmen and its relation to fertility. In: INTER. CONGR. PHYS. PATH. REPROD. AND A.I., 2., Copenhagen, 1952. Proceedings. p. 7-34.
0133. ANDERSON, J. Further investigations on sêmen of bulls. Vet. Rec., 53: 197-205, 1941.
0134. ANDERSON, J. Investigations on the sêmen of fertile and sterile bulls. Vet. Rec., 95: 457-73; 96: 18-27, 1939/40.
0135. ANDERSON, J. Notes on the sêmen of sterile and subfertile bulls. Vet. Rec., 63 : 733-6, 1951.
0136. AUSTIN, J.W.; HUP, E.W. & MURPHEREE, R.L. Comparison of quality of bull sêmen collected in the artificial vagina and by electroejaculation. J. Dairy Sci., 44: 2292-7, 1961.

0137. BAKER, F.N.; VAN DEMARK, N.L. & SALISBURY, G.W.
The effect of frequency of ejaculation on
the sêmen production seminal characteristics
and libido of bulls during the first post-
puberal year. J. Dairy Sci., 38: 1000-5,
1955.
0138. BAYLOR, M.R.B.; NALBANDOU, A. & CLARK, G. L.
Electron microscope study of sperm. Soc.
Exp. Bid., N.Y., 54: 229-32, 1943.
0139. BEAN, B.H.; PICKETT, B.W. & MARTIG, R.C. In
fluence of freezing methods, extenders, and
storage temperatures on motility and PH of
frozen bovine sêmen. J. Dairy Sci., 46:
145-9, 1963.
0140. BECK, G.H. & SALISBURY, G.W. Rapid methods
for estimating the quality of bull sêmen. J.
Dairy Sci., 26: 483-94, 1943.
0141. BECK, G.H. & SALISBURY, G.W. Vitality test
for bovine sêmen. Vet. Medicine, 39: 467,
1944.

0142. BECK, G.H.; SALISBURY, G.W.; ELLIOT, I. & WILLET, E.L. Rapid methods for estimating the number of spermatozoa in bull sêmen. J. Dairy Sci., 26 (1): 69-78, 1943.
0143. BERNDTSON, W.E. & FOOTE, R.W. The survival of frozen bovine spermatozoa following minimum exposure to glycerol. Cryobiology, 5: 398-402, 1969.
0144. BERNDTSON, W.E. & PICKETT, B.H. Evaluation of frozen sêmen. In: MORROW, D.A. Current therapy in theriogenology. Philadelphia, W.B. Saunders Co., 1980. p. 347-54.
0145. BERNDTSON, W.E. & PICKETT, B.H. En majo del sêmen. Pract. Bov., 1 (3): 14, 1980.
0146. BERNDTSON, W.E. & PICKETT, B.H. Número de espermatozôides en cada dosis. Pract. Bov., 1 (3): 11-3, 1980.
0147. BISHOP, M.W. & HANCOCK, J.L. The evaluation of bull sêmen. Vet. Rec., 67: 363-7, 1955.

0148. BLOM, E. A comparing-chamber for microscopic examination of undiluted bull sēmen. Vet. J., 102: 253-9, 1946.
0149. BLOM, E. On methods of evaluating bull sēmen. ABA, 16: 1380, 1948.
0150. BLOM, E. A new and uncomplicated method for staining of bull sperm. Skand. Vet. Tidkr., 33: 428-31, 1943.
0151. BLOM, E. On the evaluation of bull sēmen with special reference to its employment for artificial insemination. Kobenhavn Carl Fr., Mortensen, 1950.
0152. BOEHNKE, H.J.; KRAUSE, D.; STEPHAN, E.; PFEILS TICKER, J. & MARRE, H. A comparison of some methods of investigating bull sēmen. Zuchthygiene, 13 (2): 55-60, 1978.
0153. BOEHNKE, H.J.; ROSS, B.; MARRE, H & PFEILS TICKER, J. Insemination bulls and the freezing capacity of their ejaculates: analysis of one year's production. Deutsche Tierärztliche Wochenschrift, 82 (11):438-41, 1975.

0154. BONADONNA, T. & OLGIATI, L. Defferentiation between living and dead bovine spermatozoa by staining with bromo phend blue and nigro sin. Zootec. Vet. 8: 195-9, 1953.
0155. BOYD, L.J. & HAFS, H.D. Fertility of frozen sêmen containing 12, 24 or 35 million sperm extended to 0.5 ou 0.9 ml, volume in yolk citrate. J. Dairy Sci., 53: 660, 1970.
0156. BRANTON, C.; KELLGREN, H.C. & PATRICK, T. E. The importance of numbers of spermatozoa in relation to sêmen quality and fertility of dairy bulls. J. Dairy Sci., 36: 1301-6, 1953.
0157. BRANTON, C.; FOOTE, R.H. & CRUTHERS, J.C. Preliminary fertility results with frozen bovine spermatozoa. J. Dairy Sci., 38: 40-6, 1955.
0158. BRANTON, C.; FOOTE, R.H. & HENDERSON, C.R. The relationship between fertility and the number of spermatozoa inseminated. J. Dairy Sci., 37: 1353-6, 1954.

0163. BUCKNER, P.J.; WILLETT, E.L. & BAYLEY, N. Laboratory tests, singly and in combination for evaluating fertility of sêmen and of bulls. J. Dairy Sci., 37: 1050-60, 1954.
0164. BURBANK, R.C. The quantitative standardization of sperm suspensions by means of opacity. Q.J. Excerpt. Physiol., 25: 393-7, 1935.
0165. CAMPBELL, R.C.; HANCOCK, J.L. & ROTHCHILD, M.G. Counting live and dead bull spermatozoa. J. Exp. Biol., 30: 44-56, 1953.
0166. CASSOU, R. Evolution des pourcentages de fecondation en fonction a l'âge de la semence. In: CONGR. INTER. REPROD. AND A.I., 7., Munich, 1972. Proceedings. p. 1422-5.
0167. CHANG, M.C. The effect of serum on spermatozoa. J. Gen. Physiol., 30: 321-35, 1947.

0159. BRATTON, R.W.; FOOTE, R.H.; HENDERSON, C.R.; MUSGRAVE, S.D.; DUNBAR, R.S.; DUN, H.O. & BEASDSLEY, J.P. The relative usefulness of combinations of laboratory testes for predicting the fertility of bovine sêmen. J. Dairy Sci., 39: 1542-50, 1956.
0160. BROCHART, M. Control du sperma du taureau por le test au bleau de Bethylène, Suivant la technique en tube capillaire. Recuil de Mèdicine Vet., (2): 5-12, 1954.
0161. BROCHART, M. & VALETTE, P. Testing of sêmen of bulls used for artificial insemination by measuring its content of spreading factors by a biological method. Rev. Elev., 5: 195-202, 1951.
0162. BUCKNER, P.J. & WILLET, E.L. Correlation between various tests of sêmen quality and bull fertility. J. Anim. Sci., 9, 1950.

0168. COLLINS, W.J.; BRATTON, R.W. & HENDERSON, C.R.
The relationship of sēmen production to se
xual excitement of dairy bull. J. Dairy
Sci., 34: 224-7, 1951.
0169. COMSTOCK, R.E. & GREEN, W.W. Methods for sē
men evaluation : density, respiration, cly
colysis of sēmen. Proc. Amer. Soc. Anim.,
32: 213, 1939.
0170. CORVALAN, P. Investigations on the thawing of
bull sēmen (frozen in straws). Vet. Nauki,
14 (10): 104-8, 1977.
0171. COUROT, M.; ORTAVANT, R. & RICHEME, E. Remar
ques sur le nombre de spermatozoides utili
sēs dans l'insemination artificielle des
bovins. Elevage et Insemination, (2), 7-
18, 1965.
0172. CRESPO GARCIA, J. Determinacion de los esper
matozoides vivos y muertos del sēmen. Rev.
Patronato Biol. Anim., Madrid, 2: 23-51,
1956.

0173. CUMMINGS, J.N. Testing fertility in bulls.
Minesota, 1954. (Tech. Bull., 212).
0174. CUPPS, P.T.; LABEN, R.C. & MEAD, S.W. The
relation of certain sêmen quality testes
to breeding efficiency and characteristics
of sêmen from low-fertility bulls
before and after hormone injection. J.
Dairy Sci., 36: 422-6, 1953.
0175. DAVIDOVIC, A.; BORJANOVIC, S.; CVETKOV, B.
& KNEZEVIC, D. Some characters of deep
frozen sêmen and new possibilities of its
use. Anim. Breed. Abst., 40: 72, 1972.
0176. DESCHAMPS, J.C. & PIMENTEL, C.A. Exame
de sêmen em touros. Pelotas, Universide
dade de Pelotas, 1979. (UFPEL - Boletim
técnico, 12).

0177. DESJARDINS, C. & HAFS, H.D. Motility and fertility during post-thawing storage of bovine spermatozoa frozen concentrated, thawed and re-extended. J. Dairy Sci., 45: 1242, 1962.
0178. DIMITROPOULOS, R. La signification du test de la thermorésistance dans l'appréciation de la valeur fécondant du sperma congelé. Ann. Méd. Vét., 4: 215-24, 1967.
0179. DOCKE, F. & WEICHERT, W. Examination of bull semen for storage at 79°C. Zuchthyg Fortpfl. Störung u. Besamung, 1., 340-6,
0180. DOHAN, C.R.; SIMS, B.T. & SHAW, J.N. Fertility studies in the bull. II. The relation of the microscopic finding in the semen to its fertility. J. Amer. Vet. Med. Ass., 78: 665-80, 1931.
0181. DOTT, H.M. Partial staining of spermatozoa in the nigrosin, eosin stain. In: INTER. CONGR. ANIM. REPROD., 3., Cambridge, 1956. Proceedings. Sect. 3, p. 42-3.

0182. DOUGHERTY, R.W. & EWALT, H.P. Sēmen studies in bull. Amer. J. Vet. Res., 2: 419-25, 1941.
0183. EICKMANN, H. Examination of sēmen bulls for fertility. Dtsch. Tierarztl. Wschr. Tierarztl. Rdsch. 52: 52-3, 1944.
0184. ELLIOT, F.L. Techniques for evaluation of bovine sēmen. In: TECHNICAL CONF. OF A.I. AND REPROD., 6., Milwaukee, 1976. Proceedings. p. 94-5.
0185. FARRELLY, B.T. A rapid method for staining equine and bovine spermatozoa together with biophysical and histochemical considerations. Irish Vet. J., 11: 2-18, 1957.
0186. FAUKNER, L.C.; HOPWOD, M.L. & WILTBANK, J. N. Seminal vesiculectomy in bulls. II. Seminal characteristics and breeding trials. J. Reprod. Fert., 16: 179-82, 1968.

0187. FLEMING, W.N.; OLAR, T.R. & MITCHELL, J.R.
Techniques for evaluation of frozen bovine
sêmen at Curtiss Breeding Service. In:
TECHNICAL CONF. A.I. AND REPROD., 6., Mil
waukee, 1976. Proceedings. p. 88-90.
0188. FLORIN, B. Effect de la réduction du nombre
de spermatozôides par dose sur le fécon
dant du sperme de taureau. Elevage et
Insemination, 160: 3-9, 1977.
0189. FONSECA, V.O.; CHOW, L.A.; LIMA, O.P.; NORTE,
A.L. & SATURNINO, M. Inseminação artifi
cial em bovinos de corte. II. Efeito da
qualidade do sêmen sobre a fertilidade do
rebanho. In: SIMPÓSIO NAC. REPROD. ANIM.,
2., Belo Horizonte, 1976. Anais. p.282.
0190. FOULKES, J.A. & WATSON, P.A. Hyaluronidase
activity in seminal plasma as a method of
assessing bull sperm integrity. J. Re
prod. Fert., 43: 349-53, 1975.

0191. GARCIA MATA, E. The relationship between the properties of sēmen and reproductive capacity. Bol. Fac. Vet. Univ. B. Aires, 26: 55, 1949.
0192. GLEDHILL, B.L. Studies on the D.N.A. content, dry mass and optical ārea of ejaculated spermatozoa heads from bulls with normal and lowered fertility. Acta Vet. Scand., 7: 166, 1966.
0193. GOFFAUX, M. Effect du nombre de spermatozōi des mobiles utilisēs par insemination sur le pouvoir fēcondant du sperme de taureau. Ann. Zoot., 14 (4): 409-15, 1965.
0194. GOFFAUX, M.; TOURNEUS, J.C.; MESSEIN, Y.; TABA
RY, M. & THOM-ASSEY, M. Effect d'une conservation de six ans sur la qualitē et le pouvoir fēcondant du sperme de taureau. Elēvage et Insemination, 145: 3-12, 1975.

0195. GRAHAM, E.F.; VASQUEZ, I.A.; SCHMEHL, M.K.L.
EVERSEN, B.K. An assay of sēmen quali
ty by use of sephadex filtration. In:
CONGR. INTER. REPROD. ANIM. AND A.I. v.4,
p. 896-9.
0196. GROVE, D. Andrologische untersuchungen an
seburinden und versuche zur komservierung
von rindersamm bein Raumtemperaturen habi
litationsschrift. Hanvover, 1968.
0197. HAFS, H.D. & BOYD, L.J. Fertility of cat
tle inseminated with 12, 24 or 35 million
sperm in 0.5 Or 0.9 milliliter. J. Dairy
Sci., 53: 1693-6, 1970.
0198. HANCOCK, J.L. The disintegration of bull
spermatozoa. Vet. Rec., 67: 825-6, 1955.

0199. HENRICSON, B. & BACKSTROM, L. A systematic study of the meiotic, divisions in Normal and subfertile or sterile bulls and boars. J. Reprod. Fertil. 7: 53, 1964.
0200. HERRICK, J.B. Laboratory and field technique to determine fertility in the bull. J. Amer. Vet. Med. Assoc., 115: 87-90, 1949.
0201. HERRICK, J.B. & SELF, H.L. Evaluation of fertility in the bull and boar State University Press. Ames, Iowa, USA, 1962.
0202. INEICHEN, B. Methods of examination of bull sēmen. Schwerz. Arch. Tierheilk, 90: 57-70, 1948.
0203. JOHNSON, L.; BERNDTSON, W.E. & PICKETT, B. W. An improved method for evaluating acrosomes of bovine spermatozoa. J. Anim. Sci., 42: 951-4, 1976.

0204. JOHNSTON, J.E.; BRANTON, C. & HATHOR, F.
Semen evaluation techniques and fertility of dairy bulls. J. Anim. Sci., 11
(4): 740-1, 1952.
0205. JONDET, R. Contribution to the assessment of the minimal number of frozen spermatozoa necessary to obtain fertilization in the cow. In: CONGR. INTER. REPROD. ANIM. AND A.I., 7., Munich, 1972. Proceedings. v.2, p. 1443-8.
0206. JONDET, R. Fertilité et nombre minimal de spermatozoïdes en insémination artificielle bovine. C.R. Soc. Biol., 163: 2678-80, 1969.
0207. JONDET, R. Methodes pratiques d'examen du sperme de taureau au Centre d'Insemination artificielle. s.n.t.
0208. JONDET, R.; MIES FILHO, A. & RABADEUX, Y.
L'épreuve de thermoresistance dans l'appréciation de la valeur du sperm bovin congelé. C.R. Soc. Biol., 172 (4) : 764-9, 1978.

0209. JONDET, R. & RABADEUX, Y. Utilização do teste de termo-resistência na avaliação do valor do esperma bovino congelado. Elevage et Insemination, 156: 13, 1976.
0210. JUSZCZAK, J.; HIBNER, A.; ZIEMINSKI, R. & FUTUJMA, T. Development of some indices of semen quality in bulls during their first year of life. Medycyna Weterynaryjna, 32 (12): 752-4, 1976.
0211. KAISER, O. The evaluation and preservation of semen from bulls bred for bull fighting. Rev. Vet. Venezolana, 34 (199) : 102-25, 1973.
0212. KAMAROV, N.I. Influence of increased protein content of feed on the quality of bull semen. Iskusst Osemen Sel'Khoz Zhivotn, 1: 63-9, 1940.

0213. KELLY, J.W. & HURST, V. Evaluation of frozen bovine sēmen packaged in glass and plastic ampules for 3 methods of storage and shipping. Amer. J. Vet. Res., 25 : 1146-9, 1964.
0214. KELLY, J.W. & HURST, V. Relationship between certain laboratory criteria and fertility of frozen bovine sēmen. Amer. J. Vet. Res., 24: 136-8, 1963.
0215. KELLY, J.W. & HURST, V. Relationship between certain laboratory measures and fertility of bull sēmen. J. Dairy Sci., 45 : 295, 1962.
0216. KIM, S. & LEE, K.M. Conception rates with minimum spermatozoa counts. In: CONGR. INTER. REPROD. ANIM. AND A.I.; 7., Munich, 1972. v.2, p. 1449-52.
0217. KRISHNA RAO, C. Studies on the differential staining of live and dead sperm. Indian Vet. J., 33: 180-8, 1956.

0218. KUPFERSCHMIED, H. Some sêmen values of Swiss cattle breeds, with special reference to Simmental cattle. Schweizer Archiv. fur Tierheilkunde, 117: 357-64, 1975.
0219. KYAW, M.H. Rapid method of standardization of the density of bull sêmen. J. Agric. Sci., 34: 106-9, 1944.
0220. LAGERLOF, N. Sêmen examination as an aid to sexual health control in domestic animal breeding. Int. J. Fert., 9: 377-82, 1964.
0221. LASLEY, J.F. The relationship between spermatozoa motility and the percentage of live spermatozoa and fertilizing capacity of bull sêmen. J. Anim. Sci., (3) : 433, 1944.
0222. LINARES, I.A. A comparison of the methods of freezin sêmen in straws and in ampoules for artificial insemination. Anim. Breed Abstr., 38: 84, 1970.

0223. LINDAHL, P.E. & STROM, B. On the relationship between fertility and light-reflecting power in bull spermatozoa. J. Agric. Sci., 42: 184-7, 1952.
0224. LINFORD, E.; GLOVER, F.A.; BISHOP, C. & STEWART, D.L. The relationship between sêmen evaluation methods and fertility in the bull. J. Reprod. Fert., 47 (2): 283-91, 1976.
0225. LUDWICK, T.M.; OLDS, D. & CARPENTER, M. A method of evaluating bull sêmen. J. Dairy Sci., 31: 677, 1948.
0226. LUNDGREN, B. Judging the quality of bull sêmen and its influence on pregnancy results. Swensk. Vet. Tidskr., 53: 176-85, 1948.
0227. LYLE, W.E.; BROWN, L.N.; BRYNER, J.H. & LARSEN, A.B. Recommended uniform diagnostic procedures for qualifying bulls for the production of sêmen. In: ANNUAL MEETING UNITED STATES ANIM. HEALTH ASSOC., 77., 1973. p. 455-73.

0228. MAC PHERSON, J.W. Sēmen placement effects on fertility in bovines. J. Dairy Sci., 51: 807-8, 1968.
0229. MAC PHERSON, J.W.; CHATTERJEE, S. & KING, G. L. The effects of freezing method on sperm frozen in plastic straws. In: CONGR. INTER. REPROD. ANIM. INSEM. ARTIF., 6., Paris, 1968. v.2, p. 1085-6.
0230. MADDEN, D.H.L. An analysis of results obtained with frozen bovine sēmen. In: INTER. CONGR. ANIM. REPROD., 3., Cambridge, 1956. p. 33-6.
0231. MADDEN, F.W.; HERMAN, H.A. & BEROUSEK, E.K. The relationship between percentage of live spermatozoa and motility longevity, and fertility of sēmen of dairy bulls. Res. Bull. Mo. Agric. Sta., 407: 3-15, 1947.

0232. MARSHALL, C.E. & FREY, L. Sêmen evaluation at selected sires. In: TECHNICAL CONF. A.I. AND REPROD., 6., Milwaukee, 1976. Proceedings. p. 91-3.
0233. MARTIN, I.C.A. & EMMENS, C.W. Factors affecting the fertility and other characteristics of deep-frozen bull sêmen. J. Endocrinol., 17: 449, 1958.
0234. MERKT, H. & ROEHE, R. Exame e classificação de touros para uso na Inseminação Artificial. s.l, DIPAN, s.d. (BOLETIN, 123).
0235. MIES FILHO, A. & JONDET, R. Avaliação da qualidade do sêmen bovino congelado. Comun. Cient. Fac. Med. Vet. Zootec. USP, 2 (3/4): 7-18, 1978
0236. MULLER, E. Methoden fur Bestimmung von Konzentration und Beweglichkeit von Bullenspermatozoen. In: MULLER, E. Riproduzione animale e fecondazione artificiale. Milan, Edagricole, 1972. p. 179-88.

0237. NAGASE, H. Pelleted sêmen: comparision of dif
ferent extenders and process on fertility
of bovine spermatozoa. In: INTERNATIONAL
CONGR. ANIM. REPROD. AND A.I., 5., Trento,
1964. Proceedings. p. 387-91.
0238. ORLOVSKII, I.A. Quantitative characters of sê
men production in bulls. Sbornik Nauchnykh
Trudov Belorusskoi sel'skokhozyaistvennoi A
kademii, 92: 26-43, 1972.
0239. PAPEL do exame do sêmen na apreciação da ferti
lidade dos touros. Sel. Zootec., 7 (79):
31-5, 1968.
0240. PASS, B.C. & HURST, V. Relationship of motili
ty of frozen bull sêmen incubated at 38°C,
compared to frozen sêmen exposed to cold
shock and then incubated at 38°C. J. Dai
ry Sci., 45: 294, 1962.

0241. PATRICK, T.E.; BRANTON, C. & NEWSON, M.H. The effect of frequency of collection upon sêmen production and fertility of dairy bulls used in artificial breeding. J. Dairy Sci., 32: 723-4, 1949.
0242. PELLOT, J.; OLLIVER, J.P.; TOURNEUS, J. C. & COUROT, M. Sêmen quality and fertility in bovine artificial insemination after natural or synchronized estrus. In: INTER. CONGR. ANIM. REPROD. AND A.I., 8., Cracow, 1976. Proceedings. p. 850-3.
0243. PICKETT, B.W.; HALL, C.R.; LUCAS, J.J. & GIBSON, E.W. Influence of sperm number on fertility of frozen bovine sêmen. J. Dairy Sci., 47: 916-9, 1964.
0244. PICKETT.; MAC DONALD, W.A.; GOSSLEE, D. G. & COWAN, W.A. Correlation between certain laboratory stress tests and fertility of frozen bovine spermatozoa. J. Dairy Sci., 44: 1134-40, 1961.

0245. ROTHSCCHILD, M.G. A new method of measuring the activity of spermatozoa. J. Exp. Biol., 30: 178-99, 1953.
0246. ROUSSEL, J.D.; PATRICK, T.E. & KELLGREN, H.C. Effects of nitrogen and carbon dioxide on livability and fertility of frozen bovine spermatozoa. J. Dairy Sci., 45: 527-32, 1962.
0247. ROUSSEL, J.D.; PATRICK, T.E. & KELLGREN, Influence of nitrogen and argon gases on post-thawing motility, laboratory stress tests and fertility of frozen bovine spermatozoa. J. Dairy Sci., 46: 1278-82, 1963.
0248. RUTTLE, J.L.; EZAZ, Z. & SCEERY, E.J. Some factors influencing semen characteristics in range bulls. J. Anim. Sci., 41: 1069-76, 1975.

0249. SAACKE, R.G.; MARSHALL, C.E.; VINSON, W.E.; CONNOR, M.L.; CHANDLER, J.E.; MULLINS, J.; AMANN, R.P.; WALLACE, R.A.; VINGEL, W.N. & KELLGREN, H.C. Sēmen quality and heterospermic insemination in cattle. In: INTER. CONGR. REPROD. ANIM. AND A.I., 9., Span, 16-20 June, 1980. Proceedings. p. 285.
0250. SAACKE, R.G. & WHITE, J.M. Sēmen quality tests and their relationship to fertility. In: TECHNICAL CONF. A.I. AND REPROD., 4., Chicago, 1972. Proceedings. p. 22-7.
0251. SAACKE, R.G. & WHITE, J.M. The problem of variation of abnormal sperm level between ejaculates from the same bull. In: INTER. CONGR. ANIM. REPROD. AND A.I., 7., Munique, 1972. Proceedings. v.2, p. 1294-9.
0252. SALISBURY, G.W.; BECK, G.H.; ELLIOT, I. & WILLET, E.L. Rapid method for estimating the number of spermatozoa in bull sēmen. s.n.t.

0253. SAXENA, V.B. & TRIPATHI, S.S. Sēmen characteristics and preservability in Red Dare bulls. Indian J. Anim. Sci., 49 (11) : 878-83, 1979.

0254. SCHLUTTER, W. Evaluation of data from the extraction, study and preservation of bull sēmen with reference to biological and economic aspects. Hannover, Tierärztliche Hochschule, 1977. Inaugural Dissertation.

0255. SĚMEN Y sus características. Temas Orient. Agropec., (144): 63-5, 1980.

0256. SENNING, G. Comparison of the reproductive potentials of pellet and Kombipellet methods of artificial insemination. Hannover, Tierärztliche Hochschule, s.d. Inaugural Dissertation.

0257. SIRATSKII, I. Relationship between production and quality of sēmen and breed and age of bulls. Molochnoe i. Myasnoe Skotovodstvo, 17 (6): 28-9, 1972.

0258. STEHLIK, Z. Evaluation of some sêmen plasma components in the light of routine examinations and exploitation of bulls in the State Institute for Animal Insemination in Wroclaw. Zeszyty Naukowe Akademii Rolniczej we Wroclawiu Weterynaria, 32(107): 109-27, 1975.
0259. STEINBACH, J. & FOOTE, R.H. Osmotic pressure and PH effects on survival of frozen bovine spermatozoa. J. Dairy Sci., 50 (2): 205-13, 1967.
0260. STEWART, D.L. Relacion entre los metodos de evaluacion del sêmen y la fertilidad del toro. Genetica Y Reprod., 1 (2): 5-10, 1977.
0261. STEWART, D.L. & BENNET, G.L. The minimun number of spermatozoa per frozen sêmen in semination compatible with normal fertility in cattle. In: CONGR. INTER. REPROD. AND A.I., 7., Paris, 1968. Proceedings. p. 1167-9.

0262. STEWART, D.L.; O'HAGAN, C. & GLOVER, F.A. The prediction of the fertility of bull sēmen from laboratory tests. In: INTER. CONGR. ANIM. REPROD. AND A.I., 7., Munich, 1972. Proceedings. p. 252.
0263. STÖYE, H. The influence of the thawing temperature on the quality of deep frozen bull sēmen. Deutsche Tierärztliche Wochenschrift, 73: 281, 1966.
0264. SULLIVAN, J.J. & ELLIOTT, F.L. Bull fertility as affected by as interaction between motile spermatozoa concentration and fertility level in artificial insemination. In: CONGR. INTER. REPROD. ANIM. AND A.I., 6., Paris, 1968. Proceedings. p. 1307-10.
0265. SWANSON, E.W. & BEARDEN, H. An eosin-nigrosin stain for differentiating live and dead bovine spermatozoa. J. Anim. Sci., 10 : 981-7, 1951.

0266. TERBLANCHE, S.J. A semen quality score for bulls. Rhodesian Vet. J., 7 (4): 68-76 , 1977.
0267. THERET, M. Numeration des spermatozôides : mesure du ph. Rec. Med. Vet., 126: 752, 1950.
0268. THORAUSSCH, K. Untersuchungen über ein mes-
sinstrument zur feststellung der spermien-
dichte für bullensperma. Tierärztl.
Umschr., 136, 1951.
0269. VALE FILHO, V.R. Patologia do sêmen: dia-
gnóstico andrológico e classificação de
Bos taurus e Bos indicus, quanto a fer-
tilidade para uso como reprodutores, em
condições de Brasil de um estudo de
1.088 touros. s.n.t.
0270. VALE FILHO, V.R. ; PINTO, P.A. ; LEMOS, G.
B. & FONSECA, J. Normas para seleção de
touros Bos indicus quanto a fertilidade,
para uso em centrais de inseminação arti-
ficial e em testes de progênie, em con-
dições de Brasil. s.n.t.

0271. VALE FILHO, V.R.; PINTO, P.A.; MEGALE, F.; FONSECA, J. & SOARES, L.C.O.V. Fertility of the bull in Brasil, study of 1.088 bulls and 17.945 ejaculations of *Bos taurus* and *Bos indicus* and cross breeds raised in tropical conditions, comparatively. In: INTER. CONGR. ANIM. REPROD. AND A.I., 9., Spain, 16-20 June, 1980. Proceedings. p. 171.
0272. VAN DEMARK, N.L. Quantitative aspects of semen production in bulls. In: INTER. CONGR. ANIM. REPROD., 3., Cambridge, 1956. Proceedings. p. 80-9.
0273. VAN DEMARK, N.L.; MERCIER, E. & SALISBURY, G. W. The Methylene-blue reduction test and its relation to other measures of quality in bull semen. J. Dairy Sci., 28: 121-8, 1945.

0274. VOLGINA, V.I.; RIMAROVA, L.D. & STOLBOV, S.M.
Sēmen quality of bulls with different
amounts of Dutch Black pied inheritance .
Byulleten Vseynogo Nauchno Issledova
tel'skogo Instituta Razveniia i genetiki
sel'skokhozyaistvennykh Zhivotnykh, 18:
8-10, 1976.
0275. WEETH, H.J. & HERMAN, H.A. The relationship
between sēmen quality and conception rate
in artificial insemination of dairy cattle.
Res. Bull. Mo. Agric. Exp. Sta., 447: 11,
1949.
0276. WEISS, W. The influence of various kinds of
glass on the viability of bull sēmen. Han
nover, 1950. Inaugural Dissertation.
0277. WELLS, M.E. & HEFLEY, P.J. The effect of
equilibration time on sperm cells stored
in straws. Res. Rep. Agric. Exp. Stn .
Okla. Sta. Univ., (MP-92): 267-72, 1974.

0278. WIGGIN, H.B. Factors affecting survival of bull spermatozoa frozen in plastic straws. Pennsylvania, Pennsylvania State University, 1974. Tese.
0279. WILLET, E.L. & BUCKNER, P.J. The determination of numbers of spermatozoa in bull sēmen by measurement of light transmission. J. Anim. Sci., 10: 219-25, 1951.
0280. WILLMINGTON, J.A. The relationship in the bull between the number of live sperm after freezing and fertility. In: INTER. CONGR. REPROD. ANIM. AND A.I. 9., Span, 16-20 June, 1980. Proceedings. p. 387.
0281. ZEMJANIS, R. Colección e investigación del sēmen. In: _____. Reproducción Animal: diagnōstico y técnicas terapéuticas. México, Limusa, 1977. p. 155-74.

CARACTERÍSTICAS MORFOLÓGICAS DO ESPERMATOZÓIDE

0282. AMANN, R.P. & ALMIQUIST, J.O. Reproductive capacity of dairy bulls. VII. Morphology of epididymal sperm. J. Dairy Sci., 45: 1526, 1962.
0283. ARCULARIUS, H. Sêmen characters and the influences on viability of spermatozoa. Tierzucht, 3: 108-9, 1949.
0284. BARNABÉ, R.C.; VISITIN, J.A.; BARNABÉ, V.H.; VIANA, W.G.; CASAGRANDE, J.F. & ALMEIDA, C.A. Utilização de microscopia de contraste de interferência diferencial para avaliação da morfologia espermática. In: CONF. ANUAL DA SPMV, 34., Pirassununga, 1979. p. 11-2.
0285. BIALY, G. & SMITH, V.R. Influence of seminal vesicular fluid on morphology of bull spermatozoa. J. Dairy Sci., 41: 422-8, 1958.

0286. BISHOP, M.H. Biology of spermatozoa in sex and internal secretions. 3 ed. s.l., The Williams and Wilkins Co., 1961.
0287. BISWAS, J.C.; SIDHU, N.S. & BHAT, P.N. Studies on dimensional characteristics of spermatozoa of cross-bred bulls in relation to fertility. Indian J. Anim. Sci., 45 (12): 919-22, 1977.
0288. BLAKE, T.A. Inheritance of morphological characters in the sperms of cattle. Nature, London, 155: 631, 1945.
0289. BLOM, E. Interpretation of spermatocytology in bulls. Fert. Steril., 1: 223-38, 1950.
0290. BLOM, E. Microscopic examination of bull sperm. Skand. Vet. Tidskr., 33: 484-98, 1942.

0291. BLOM, E. & BIRCH-ANDERSEN, A. The ultrastructure of the bull sperm. II. The sperm head. Nord. Vet. Med., 17 (4): 193, 1965.
0292. BLOM, E. & CHRISTENSEN, O.O. Seminal vesiculites in the bull caused by C. pyogenes. Nord. Vet. Med., 17: 453, 1965.
0293. BONADONNA, T.; CARETTA, A. & CORRIAS, A. Electron microscopic study of the spermatozoa of the bull. Zootec. Vet., 8: 369-89, 1953.
0294. BRANTON, C. & SALISBURY, G.W. Morphology of spermatozoa from different levels of the reproductive tract of the bull. J. Anim. Sci., 6: 154-60, 1947.
0295. BRETSCHNEIDER, L.H. Morphology and pathology of bull spermatozoa. Proc. Acad. Sci. Amst., Ser. C., 58: 495-508, 1955.
0296. CAMPBELL, R.C. & SHAW, I.G. Cytological characteristics of fertilizing capacity of bull spermatozoa. J. Agric. Sci., 55: 91-9, 1960.

0297. CASAGRANDE, J.F. Relações entre algumas características físicas e morfológicas do sêmen de zebuínos e sua congelabilidade. Jaboti cabal, Faculdade de Medicina Veterinária e Agronomia, 1973. Tese de Doutorado.
0298. CHALLICE, C.E. Some observations on the morphology of spermatozoa by electron microscopy. In: PROC. SOC. STUDY FERTIL., 4. , London, 1953. p.21-6.
0299. COULTER, G.H. & FOOTE, R.H. The motility of acrosomal morphology and oxygen uptake of bull spermatozoa during processing and after freezing in straws. A.I.Digest, 22 (12): 12-5, 1974.
0300. CRESPO GARCIA, J. Las anormalidades morfológicas del spermatozõide del toro. Rev. Patronato Biol. Anim., Madrid, 2: 205-40 , 1956.

0301. FONSECA, V.O.; LIMA, O.P.; SHOW, L.A. & ABREU, J.J. Alguns aspectos físicos e morfológicos do sêmen de touros púberes da raça Neloze. Arq. Esc. Vet. UFMG, 27 (3): 269-80,
0302. GAMCIK, P. The morphology of sperms of bulls with impaired and intact fertility. Vet. Med. Praha, 11: 431-6, 1966.
0303. GEMIN, D.I. The role of the large number of spermatozoa in the sexual process. Z. Obsc. Biol., 12: 108-21, 1951.
0304. GILLETE, E.L. Morphology of bovine epididymal spermatozoa after ray-irradiation of testes. Colorado, Colorado State University, 1965. Tese de Doutorado.
0305. GRAY, J. The movement of the spermatozoa of the bull. J. Exp. Med., 35: 96-108, 1958.

0306. HAASE, H.; BACH, S.; STEMMLER, K.H. & MULLER, F. Morphological examination of bull sēmen with particular reference to phase-contrast microscopy. Monatshefte fur Vet., 32 (12): 941-4, 1977.
0307. HANCOCK, J.L. The morphology of bull spermatozoa. J. Exp. Biol., 29: 245-53, 1952.
0308. HARASYMOWYCZ, J.; BALL, L. & SEIDEL JUNIOR, G.E. Evaluation of bovine spermatozoal morphologic features after staining or fixation. Amer. J. Vet. Res., 27: 1053-7, 1976.
0309. HERRNLEBEN, H.G. Comparative electron microscopic study of spermatozoa of domestic mammals. Wiss. Z. Humboldt. Univ., 4: 367-78, 1954/5.

0310. HILL, H.J. Morphology of bovine sēmen and its relative importance in the evaluation of breeding soundness. J. Rocky Mountain Soc. for Study of Breeding Soudness of Bulls, julio, 1956
0311. JIRANEK, E. & ROB, O. Study of the vacuoles in the nucleoplasm of fresh and deep-frozen sēmem. Veterindrni Med., 16 (8): 495-500, 1971.
0312. JONES, W.A. Abnormal morphology of sperm in Guernsey bull. Brit. Vet. J., 118: 257-61, 1962.
0313. KESSLER, H. Electron microscopic studi of spermatozoa of domestic mammals with some physiological observations. Wiss. Z. Humboldt. Univ., 4: 380-94, 1954/5.
0314. KNUDSEN, O. Cytomorphological investigations into the spermiocytogenesis of bulls with acquired disturbances in spermiogenesis. Acta Path. Microbiol. Scand., suppl. 101, 1954.

0320. LENZ, R.W.; GRAVES, C.N. & LODGE, J.R. In
fluence of incubation in seminal plasma
on subsequent metabolic and morphologi-
cal characteristics of bovine spermato-
zoa. Theriology, 7: 265-6, 1977.
0321. MAC MILLAN, K.L.; NEWLOOK, C. & WATSON, J.
D. Testicular and epididymal sperm num-
bers in young Friesian bulls. New Zeal.
Vet. J., 15 (2): 255-9, 1972.
0322. MAULE, J.P. ed. The semen of animals and
artificial insemination. Farnham Royal
Commonwealth Agric. Bureaux, 1962. 420 p.
(Technical Communication, 15).
0323. MERCIER, E. The relationship between the
proportion of morphological abnormal
spermatozoa and other criteria of bull
semen quality. Vet. Bull., nov., 1945.
0324. MIOTTI, T. Lo sperma: biologia, patologia
clinica. Turin, Industrie Tipografico,
1942. 178 p.

0325. MORSTIN, J. & COUROT, M. Ultrastructure des spermatozôïdes de taureaux de différentes fécondance. Ann. Biol. Anim. Bioch. Bio phys., 14: 581-90, 1974.
0326. MUKHERYEE, D.P.; KUMAR, R. Morphology of bull spermatozoa in relation to fertility. Indian J. Anim. Sci., 41 (4): 218-22, 1971.
0327. OLSEN, H. Morphological srudies on sêmen and testes. Copenhagen, 1948. Tese.
0328. PEET, R.L. The morphological examination of bovine spermatozoa. In: ANNUAL CONF. AUSTRALIAN VET. ASSOC., 54., Perth, 9-13 may, 1977. Proceedings. p. 78-9.
0329. RAO, A.R. & RAO, T.L.N. Changes in the morphology of bovine spermatozoa during preservation and storage. Indian Vet. J., 56 (4): 294-6, 1979.

0330. RAO, C.K. & HART, G.H. Morphology of bovine spermatozoa. Amer. J. Vet. Res., 9: 117-24, 1948.
0331. RODEL, L. Mechanism of maturation of spermatozoa in the epididymis. Fortpflanzung, 5: 49-51, 1955.
0332. SAACKE, R.G. Morphology of the sperm and its relationship to fertility. In: INTER. CONF. ON A.I. AND REPROD., 3., 1970. Proceedings. p. 17-30.
0333. SAACKE, R.G. & ALMIQUIST, J.O. Ultrastructure of bovine spermatozoa. Amer.J.Anat., 115 (1): 143-61, 1964.
0334. SAACKE, R.G. & MARSHALL, C.E. Observations on the acrosomal cap of fixed and unfixed bovine spermatozoa. J. Reprod. Fertil., 16: 511-4, 1968.
0335. SCHAPER, A. Examen morphologique du sperme de taureau. Paris, Tableau de Normalization, s.d.

0336. SELINOVA, O.A. The movement and disappearance of the kinoplastic droplet in the spermatozoa of farm animals. Uspekhi Zooteh Nauk., 4 (1): 67, 1937.
0337. SETTERGREN, I. & NICANDER, L. Ultrastructure of desintegrated bull sperm. In: INTER. CONGR. ANIM. REPROD. AND A.I., 6., Paris, 1968. Proceedings. v.1, p. 191-4.
0338. SIMORAG, Z. Attempt to asses morphological changes occuring in frozen bull and ram semen. Medycyna Weterynaryjna, 27 (11) : 679-82, 1971.
0339. TILLMANN, H.; CZERNICKI, B. & GEHRING, W. The citology of spermatogenesis with special reference to cell types. Zbl. Vet. Med., 2: 303-25, 1955.
0340. TRIMBERGER, G.W. & DAVIS, H.P. The relation of morphology to fertility in bull semen. J. Dairy Sci., 25: 692-3, 1942.

0341. VALE FILHO, V.R. Anotaciones de reproduccion animal: IV. Inseminacion artificial. Bogotá, Universidad Nacional de Colombia, 1969.
0342. VALE FILHO, V.R. Exame de sêmen em espermio
grama. In: SEMANA DE ZOOTECNIA, 2., Pi
rassununga, CZIPI, 1977.
0343. WERLMEISTER, A.V.H. Spermatological study of
bull ejaculates during deep-freeze preser
vation, with particular reference to acro
some morphology and the heat resistance
test. Tierärztliche Hochschule, Hannover, 1975. Tese.
0344. WU, S.H. & NEWSTEAD, J.D. Electron microsc
pe study of bovine epididymal spermatozoa.
J. Anim. Sci., 25: 1186-96, 1966.

COMPOSIÇÃO QUÍMICA DO SÊMEN

0345. ABDOU, M.S.S.; EL - GUINDI, M.M. & BAYOUMI, M.T. Enzymic profile of the sêmen of bovines. I. Acetylcholinesterase activity. Zentral. Vet., 24A (8): 636-41, 1977.
0346. ABDOU, M.S.S.; EL - GUINDI, M.M.; EL - MENOUFY, A.A. & ZAKI, K. Some biochemical and metabolic aspects of the sêmen of bovines. III. Inorganic phosphorus relationships. Zeit. Tierz. Zucht., 94 (3/4): 186-97, 1978.
0347. ACOTT, T.S. & HOSKINS, D.D. Bovine sperm forward motility protein: binding to epididymal spermatozoa. Biol. Reprod., 24 (2): 234-40, 1981.
0348. AGUILAR, R.R. Some physical, cellular and biochemical studies of bovine sêmen and their relationship with fertility. Diss. Abst. Inter. Série B., 39 (5): 2031, 1978.

0349. ALAMY, M.A.; AMIN, S.O.; DANASOURY, M.S. & OLOUFA, M. Fructolysis index in the sêmen of buffalo, Jersey and Friesian cattle at different ages. Agric. Res. Rev., 54 (6) : 25-30, 1976.
0350. AL - HAKIM, M.K.; GRAHAM, E.F. & SCHMEHL, M. K.L. Free aminoacid and amino compounds of bovine seminal plasma. J. Dairy Sci., 53: 84-8, 1970.
0351. ANDERSON, J. A note on fructolysis and other characteristics in bull sêmen. Brit. Vet. J., 107: 435-7, 1951.
0352. ANDERSON, J. The pH change in bull sêmen and fertility. J. Agric. Sci., 42: 172-4, 1952.
0353. ANTONOV, S. & ZAKHARIEV, Z. Alkaline phosphatase activity in sêmen, testes and accessory sexual glands of bulls. Vet. Nauk, 14 (3): 61-7, 1977.

0354. BHARGAVA, P.M. & WORK, T.S. The chemical composition of bull sēmen with special reference to nucleic acids, free nucleotides and free amino acids. Biochem. J., 73: 242-7, 1959.
0355. BHASKER, B.V. Comparative studies on the biochemical constituents of plasma of poor and good quality sēmen. Mysore J. Agric. Sci., 10 (1): 153, 1976.
0356. BIALY, G.; LUDWIG, T.M. & HESS, E.A. Influence of lipoprotein on the freezing of bovine spermatozoa. J. Dairy Sci., 40: 1189-92, 1957.
0357. BIDOT, A. Variations in fructose and lactic in bull sēmen. Men. Assoc. Latinoamer. Prod. Anim., 13: 181, 1978.
0358. BLACKSHAW, A.W. & EMMENS, C.W. The interaction of pH, osmotic pressure and electrolyte concentration of the motility of ram, bull and human spermatozoa. J. Physiol., 114: 16-26, 1951.

0359. BOGART, R.; MAYER, D.T. The effects of egg yolk on the various physical and chemical factors detrimental to spermatozoa viability. J. Anim. Sci., 9: 143-6, 1950.
0360. BONADONNA, T. & ROYCHOUDHURY, P.N. Studies on chemical constituents of bull sêmen. IV - Effect of cold shock on total cholesterol content. Zbl. Vet. Med. A., 16: 176-80, 1969.
0361. BORYCZKO, Z.; FURÓWICZ, A. Changes in sêmen and blood of bulls after experimental orchitis and inflammation of the seminal vesicles. I. Results of physical, biochemical and bacteriological examinations. Medycyna Weterynaryjna, 27 (7): 423-8, 1971.
0362. BRATANOV, K.; DIKOV, V.; RADEV, G. & DANOV, D. Studies on the immunology of reproduction. VII. The role of sperm antibodies in the insemination of cows with incomplete uterine involution and cows with latent endometritis. s.n.t.

0363. BROCHART, M. Presence de l'adrenaline dans le sperme des mamiferes. C.R. Soc. Biol., Paris, 142: 646, 1948.
0364. BROWN, D.V.; SENGER, P.L.; STONE, S.L.; FROST, J.A. & BECKER, W.C. Glutathione peroxidase in bovine sēmen. J. Reprod. Fertil., 50 (1): 117-8, 1977.
0365. BRUGGEMANN, J.; BRONSCH, K.; DREPPER, K. & SCHLE, J. Biochemistry of sēmen and ova. I. Chemical composition and some physical constants of the ejaculate, seminal vesicle secretion and vaginal mucus of cattle. Fortpflanzung, 4: 111-4, 121-3, 1954
0366. BUSHWAY, A.A. & CLEGG, E.D. Composition and synthesis of gangliosides in bovine testis, sperm and seminal plasma. Biol. Reprod., 17 (3): 432-42, 1977.

0367. CLEGG, E.D. & FOOTE, R.H. Phospholipid composition of bovine sperm fractions seminal plasma and cytoplasmic droplets. J. Reprod. Fertil., 34 (2): 379-83, 1973.
0368. CONCHIE, J. & MANN, T. Glycosidases in mammalian sperm and seminal plasma. Nature, London, 179: 1190-1, 1957.
0369. COULTER, G.H. Biochemical and physical changes in bovine spermatozoa due to freezing storage at 196°C, and age of bull. Ithaca, Cornell University, 1973. Tese de Douto ramento.
0370. COURTENS, J.L. & LOIR, M. Comparison of the removal of Lysine-rich proteins from the nuclei of boar, bull, goat, horse, ram and rat spermatids, a cytochemical study. In: INTER. CONGR. ANIM. REPROD. AND A.I., 9., Span, 16-20 June, 1980. Proceedings. p. 280.

0371. CRABO, B. & GUSTAFSSON, B. Chemical investigation of epididymal sperm plasma. Inter. J. Fertil., 8: 866, 1963.
0372. CRAGLE, R.G.; SALISBURY, G.W. & VAN DEMARK, N.L. Sodium, potassium, calcium and chloride distribution in bovine sēmen. J. Dairy Sci., 41: 1267-72, 1958.
0373. DALGAARD - MIKKELSEN, S. Sēmen hyaluronidase. Nord. Vet. Med., 1: 769-90, 1949.
0374. DEMMA, A. Activity and polymorphism of lactate dehydrogenase (L D H) in bull seminal plasma. Institutul Agronomic "N. Balcescu", 18/19: 51-6, 1976.
0375. DIBIROV, M.K. Immunological characters of bull sēmen. Referativnyi Zhurnal, 8 (58): 424, 1978.

0376. DOICHEVA, M. Fructose and citric acid content in the sêmen of breeding bulls with some forms of importance. Vet. Nauki, 16 (10): 48-54, 1979.
0377. DOJCSEVA, M.; SZOJANOV, T. & TUNCSEY, T. Comparative study on fructose and citric acid levels of bull sêmen in various seasons. Magyar Allatoivosok Lapja., 34 (4): 243-5, 1979.
0378. EDELMAN, G.M. & MILLETTE, C.F. Molecular probes of spermatozoan structure. Proc. Nat. Acad. Sci., 68: 2436, 1971.
0379. EHLERS, M.H.; FLERCHINGER, F.H. & ERB, R. E. Initial levels of fructose and citric acid in bull sêmen as related to fertility. J. Dairy Sci., 36: 1020-6, 1953.

0380. EL-GUINDI, M.M. & ABDOL, M.S.S. Enzymic profile of the sēmen of bovines. III. Amylase (alpha-1,4 - glucan; 4 - glucano - hidrolase) activity. Zentralblatt fur Vet. 25A (10): 814-20, 1978.
0381. FLIPSE, R.J. & POTTER, F.E. Presence of volatile fatty acids in bovine sēmen. Proc. Soc. Exp. Biol., N.Y., 89: 432-3, 1955.
0382. GASTAUER, R. Enzyme activities and electrolyte concentrations in blood serum and seminal plasma of bulls. Fachbereiches Tiermedizin, Munchen, 1974. Inaugural Dissertation.
0383. GILLER, I.P. The immune reaction of bull spermatozoa with blood serum and oestrus mucus of cows in relation to inseminations results. Referativnyi Zhurnal, 5 (58): 302, 1978.

0384. HADARAG, E.; BURVIANA, L.M.; COLTAU, G. & BAR
BULESCU, I. The influence of congelation
on the aspartate: 2-oxo - glutamate amino
ferase (AoA) and aldolase activity of bull
spermatozoa. In: CONGR. INTER. REPROD.
ANIM. AND A.I., 8., Cracovie, 1976. Proce
edings. v.4, p. 802-4.
0385. HENDRIKSE, J. Aglutination in bull sēmen.
Wien Tierarztl. Mschr., 49: 128-35, 1962.
0386. HESS, E.A.; LUDWICK, T.M.; MARTIG, R.C. & ELY,
F. Influence of seminal vesiculectomy on
certain physical and biochemical proper
ties of bovine sēmen. J. Dairy Sci., 43:
256-65, 1960.
0387. HODGES, R.T. & HOLLAND, J.T.S. The recovery
of ureaplasmas from the sēmen and prepuce
of bulls. New Zeal. Vet. J., 28 (5): 89-
90, 1980.

0388. HOPWOOD, M.L. & GASSNER, F.X. The free amino acids of bovine sēmen. Fertil. Steril. 13: 290, 1962.
0389. HORST, C.J.G. VAN DER.; ELGERMA, A.; BOER; M. J. de & BESTEBROES, A.C. Some biochemical parameters for qualification of bull sēmen. Vet. Quart., 1 (2): 97-108, 1979.
0390. HRUDKA, F.; HORAKOVÁ, A. & HORAK, J. Cytochemical studies on the activity of endogenous reductases in spermatozoa. III. Effect of ionizing radiation. Vet. Med. Praha, 11: 361-70, 1966.
0391. IRAMAIN, C.A.; OWASOYO, J.O. & ODILI, P.I. Acetylcholinesterase activity in the sēmen of indigenous (Fulani) and exotic (Holstein) bulls in Nigēria. In: INTER. CONGR. ANIM. REPROD. AND A.I., 9., Span, 16-20 June, 1980. Proceedings. p. 278.

0392. JAQUET, J. & CASSOU, R. Hyaluronidase du sperme et fecondité des taureaux. C.R. Acad. Sci., Paris, 232: 1252-4, 1951
0393. JURGENS, F. Ascorbic acid content of sēmen of fertile and infertile bulls and goat bucks. Dtsch. Tierarztl. Wschr., 50: 393, 1942.
0394. KAKAR, M.L. Studies on physical and chemical young Holstein-Friesian X Haryana and Brown Swiss X Haryana cross bred bulls. Haryana Vet., 10 (1): 68-9, 1971.
0395. KANN, M.L.; HOLLANDE, E. Modifications cytochimiques du glycolemme (cell coat) du spermatozoïde de taureau avant et après congélation. In: CONGR. INTER. REPROD. ANIM. AND A.I., 7., Munich, 1972. Proceedings. v.2, p. 1326-9.
0396. KAPOOR, P.D. Note on some chemical and biochemical characteristics of sēmen of Murrah and Hariana bulls in various months. Indian J. Anim. Res., 12 (1): 53-4, 1978.

0397. KASHIWABARA, T.; TANAKA, R. & MATSUMOTO, T.
Tail to tail agglomeration of bull spermatozoa by phytoagglutinins present in soy-beans. Nature, London, 207: 831-2, 1965.
0398. LINDAHL, P.E. Head-to-head association in bovine spermatozoa induced by catecholamines. Exp. Cell. Res., 113 (2): 421-33, 1978.
0399. LUKAC, J.; PRIBANIC, M. & KOREN, E. Calcium-binding protein in bull seminal vesicle secretion and seminal plasma. J. Reprod. Fertil., 48 (1): 77-81, 1976.
0400. LUTWALK-MANN, C. & ROWSON, L.E.A. The chemical composition of the pre-sperm fraction of bull ejaculate obtained by electrical stimulation. J. Agric. Sci., 43: 131-5, 1953.

0401. MAC FARLANE, J.S. & ABBISS, T.P. Seminal fructose levels as a parameter of libido in entire and vasectomised Zebu bulls. Trop. Anim. Health Prod., 7 (1): 51-5, 1975.
0402. MAC LEOD, J. The physiology of mammalian semen. Ann. Rev. Physiol., 5: 399-412, 1943.
0403. MANN, T. Biochemistry of semen and of the male reproduction tract. New York, John Wiley & Sons, 1964.
0404. MANN, T. Fructose and fructolysis in semen in relation to fertility. Lancet, 254: 446-8, 1948.
0405. MANN, T. & BROCHART, M. Biochimie du sperme. Paris, Presses Universitaires, 1956.

0406. MANN, T. & LUTWAK MANN, C. Biochemical changes underlying the phenomenon of cold-stock in spermatozoa. Arch. Sci. Biol., 39: 578, 1955.
0407. MARTINI, E. The deamination capacity of bovine semen. Zoot. Vet., 2: 230-2, 1947.
0408. MATOUSEK, J.; PICHA, J.; PICHOVÁ, D. & PELETIKOVÁ, J. Seminal ribonuclease of bulls: biosynthesis in normal and orchitic bulls and correlation with blood plasma hormone levels. Anim. Reprod. Sci., 3 (1): 1-15, 1980.
0409. MAXINOV, N.A. Chemische schutzmittel der pflanzen gegen einfrieren. Ber. Dtsch. Bot. Ges., 30: 52-65; 293-305; 504-16, 1912.
0410. MELANPY, R.M.; CRAVAZOS, L.F. & PORTER, J. C. Cytochemical reactions of bovine spermatozoa and seminal plasma. J. Dairy Sci., 35: 140-8, 1952.

0411. MELLAD, K.E. & HINES, E.C. Partial physico chemical and immunological characteriza tion of bovine sēmen isoantigens. J. Anim. Sci., 45 (6): 1353-9, 1977.
0412. MENEZO, Y. & FLECHON, J.E. Utilization d' une microtechnique pour la determination des activitēs enzymatiques des spermato zōides et du plasma sēminal chez le la pin et le taureau. C.R. Acad. Sci., 277: 1037-40, 1973.
0413. MILLAR, P.G. Observations on the presence of a haemolysin in bovine sēmen. Brit. Vet. J., 112: 106-15, 1956.
0414. MULLER, E. Comparative studies on the moti lity and dehydrogenase activity of fro zen and fresh sēmen. Deutsche Tierarz tliche Wochenschrift, 83 (9): 393-8, 1976.

0415. PEDROSO, R. & KREDE, F. Breed and environmental effects on biochemical characteres of sēmen from Holstein - Friesian and Zebu bulls in Cuba. Rev. Cubana Reprod. Anim., 2 (2): 71-81, 1976.
0416. PEDROSO, R.; KREDE, F.; MONTES, I. & CUESTA, A. Biochemistry of seminal plasma and sperm count in bulls with reproductive disorders. Mem. Assoc. Latinoamer. Produc. Anim., 13: 174-5, 1978.
0417. PETRUK, Ye. M. Oxidative processes of spermatozoa in deep - frozen bull sēmen. Nauk. Pratsi. Nauk-Dosl. In-t Zemlerobstva intva rinnitstva Zakhidn R-niv URSR., 17: 320-5, 1971.
0418. PEVZNER, I. & CHECHENETS, V. Composition of rations and production of sēmen in bulls. Melochnoe i myasnoe Skotovodstvo, 17 (6): 30-1, 1972.

0419. PICKETT, B.W. & KOMAREK, R.J. Effect of cold shock and freezing on loss of lipid from spermatozoa. J. Dairy Sci., 50: 753-7, 1967.
0420. PICKETT, B.W. & KOMAREK, R.J. Lipid and dry weight of bovine seminal plasma and spermatozoa from first and second ejaculates. J. Dairy Sci., 50: 742-6, 1967.
0421. PORTER, J.C.; SHANKMAN, S. & MELAMPY, R.M. Chemical composition of bovine spermatozoa. Proc. Soc. Exp. Biol. N.Y., 77: 53-6, 1951.
0422. PRINZEN, R. Determination of Adenosine triphosphate (ATP) in fresh and frozen bull semen by means of a rapid method. Zuchthygiene, 12 (3): 105-8, 1977.
0423. PUNTRIANO, G.O. Qualitative investigation of estrogens and testosterone of bull semen. Amer. J. Vet. Res., 14: 542-7, 1953.

0424. REID, J.T.; WARD, G.M. & SALISBURY, R.L. The relationship on the change in pH effected by incubation to other sēmen characteristics. J. Dairy Sci., 31: 383-8, 1948.
0425. RIKMENSPÖEL, R.; ORRIS, S.E. & O'DAY, P.M. Ionic requirements of impaired bull spermatozoa driven by external ADP and ATP. Exp. Cell. Res., 11 (2): 253-9, 1978.
0426. RIKMENSPÖEL, R.; VAN HERPEN, G. & VAN DAM, G. C. Physical investigations on the movements of bull sperm cells. In: INTER. CONGR. ANIM. REPROD., 3., Cambridge, 1956. Proceedings. p. 19-20.
0427. ROLLINSON, D.H.L. Fructose estimation and fructolysis of abnormal sēmen: results obtained in the field. Vet. Rec., 63: 548-52, 1951.

0428. ROYCHOUDHURY, P. N. Glutamic oxaloacetic transaminase (GOT) in bull sēmen. Bangalore, National Dairy Research Institute, 1978.
0429. SARKAR, B.C.R.; LUECKE, R.W. & DUNCAN, C.W. The amino acid composition of bovine sēmen. J. Biol. Chem., 171: 463-5, 1947.
0430. SARTORE, G.; CRISTOFORI, F.; ARIA, G. & FACELLO, C. Investigation on the soluble proteins of bull spermatozoa. In: INTER. CONGR. ANIM. REPROD. AND A.I., 9., Spain, 16-20 June, 1980. Proceedings. p. 283.
0431. STOJANOV, T.; KOSTADINOV, B. Alkaline phosphatase content of bull sēmen. In: WORLD VET. CONGR., 20., Thessaloniki, 1975. Proceedings. p. 983-4.

0432. STRZEZEK, J.; AL-TAHA, T.J.; SMIGIELSKA, J. & HOSAJA, M. Biochemical characteristics of bull sêmen after prolonged storage in liquid nitrogen. Medycyna Weterynaryjna, 35 (10): 626-9, 1979.
0433. STRZEZEK, J. & GLOGOWSKI, J. Chemical composition of the sêmen plasma of animals and the state of the reproductive systems. Medycyna Weterynaryjna, 33 (2): 115-8, 1977.
0434. SWYER, G.I.M. The hyaluronidase content of sêmen. Biochem. J., 41: 409-13, 1947.
0435. SZUMOWSKI, S. Etudes sur quelques propriétés physiques du sperme de taureau. Rec. Med. Vet., 124: 124-36, 1948.
0436. TAMBLYN, T.M. & FIRST, N.L. Caffeine stimulated ATP-reactivated motility in a detergent-treated bovine sperm model. Arch. Biochem. Biophysics., 181 (1): 208-15, 1977.

0437. VAN DEMARK, N.L. & SALISBURY, G.W. The concentration of some B vitamin in bull sēmen. J. Biol. Chem., 156: 289-91, 1944.
0438. VAN KOETSVELD, E.E. & SPRIYT, J. Manganese and copper in bull sēmen. Tijdschr. Diergeneesk., 84: 751-8, 1959.
0439. VOLOSKOVA, A.P. The lipoid content of the sēmen of domestic animals. Vest. Sel'sk. Nauki Vet., 1940 (3): 91-4, 1940.
0440. WALES, R.G.; SCOTT, T.W. & WHITE, I.G. Biuret reactive materials in sēmen. Aust. Exp. Biol. Med. Sci., 39: 455-62, 1961.
0441. WALES, R.G.; WALLACE, J.C. & WHITE, I.G. Composition of bull epididymal and testicular fluid. J. Reprod. Fertil., 12: 139-44, 1969.

0442. WEITZE, K.F. Importance of the glutamate oxalacetate transaminase activity in spermato logical diagnosis. Zuchthygiene, 11 (2): 62-7, 1976.
0443. WHITE, I.G. Biochemical aspects of mammalian sēmen. Anim. Breed. Abst., 26: 109-23, 1958.
0444. WHITE, I.G. & DARIN-BENNETT, A. The lipids of sperm in relation to cold shock. In: CONGR. INTER. REPROD. ANIM. AND A.I., 8., Cracovie, 1976. Proceedings. v.4, p. 951-4.
0445. WHITE, I.G. & GRIFFITHS, D.E. Guanidines and phosphagens of sēmen. Aust. J. Exp. Biol. Med. Sci., 36: 97-101, 1958.
0446. WHITE, I.G. & LINCOLN, G.J. The yellow pigmentation of bull sēmen and its content of riboflavin, niacin, thiamine and related compounds. Biochem. J., 76: 301-6, 1960.

DILUENTES E DILUIDORES

0447. ABBITT, B.; SEIDEL JUNIOR, G.E. & BERNDTSON, W.E. Effect of tris (Hydroximethyl) aminomethane salt of prostaglandin F2a, on post-thaw motility of bovine spermatozoa. J. Dairy Sci., 60 (12): 1991-3, 1977.
0448. ABREO, C.B.; KING, G.J.; MC MILLAN, I. & REEDS, C.R. Effects of increasing concentrations of minocin on the motility of bovine spermatozoa processed in various extenders. Can. Vet. J., 20 (9): 233-6, 1979.
0449. ADLER, H.C. & RABECH, N.O. Studies of the effect of sulphanilamide on the fertility of bovine sêmen. Nord. Vet. Med., 8: 351-6, 1956.
0450. ALBERTSEN, B.E. The bactericidal effect of antibiotics in sêmen diluents. In: INTER. VET. CONGR. STOCKHOLM, 15., Proceedings. v.2, pt. 1, p. 731-4.

0451. ALMIQUIST, J.O. A comparison of penicilin, streptomycin and sulfanilamide for improving the fertility of sêmen from bulls of low fertility. J. Dairy Sci., 34: 819-22, 1951.
0452. ALMIQUIST, J.O. Diluents for bovine sêmen. XI- Effect of glycerol on fertility and motility of spermatozoa in Homogenized milk and skimmilk. J. Dairy Sci., 45: 911, 1962.
0453. ALMIQUIST, J.O.; FLIPSE, R.J. & THACKER, D.L. Diluents for bovine sêmen. IV. Fertility for bovine spermatozoa in heated homogenized milk and skimmilk. J. Dairy Sci., 37: 1303, 1954.
0454. ALMIQUIST, J.O. & WICKERSHAM, E.W. Diluents for bovine sêmen. XII. Fertility and motility of spermatozoa in skimmilk with various levels of glycerol and methods of glycerolation. J. Dairy Sci., 45: 782, 1962.

0455. ANDERSON, H.W. & SEATH, D.M. Effect on delay in diluting and cooling on keeping quality of bull sēmen. J. Dairy Sci., 31: 551-5, 1948.
0456. ANGEL, H.; SCHINDLER, H. & MARKS, J. Streptomycin in bull sēmem diluent for artificial insemination. Refuah Vet., 16: 4-6, 1959.
0457. BAIER, W.; LEIDEL, W. & GREIFF, W. Glycine in diluents for bull sēmen. Berl. Munch. Tierarztl Wschr., 70: 229-30, 1957.
0458. BAYLEY, N.D.; COBBS, H.V. & BARRET, G.R. A synthetic pabulum v.s. yolk-citrate buffer as a diluter of bull sēmen. J. Dairy Sci., 33: 24-7, 1950.
0459. BERTHELON, M. & LARCHIER, H. Action of penicilin of bull sēmen. Rev. Med. Vet., 103: 129-41, 1952.

0460. BHATTACHARYA, M.K. & MATHUR, A.L. Effects of diluents containing skim-milk on livability and fertility of spermatozoa stored at room temperatures. Indian J. Anim.Sci., 48 (1): 7-9, 1978.
0461. BISHOP, M.W.H. & SALISBURY, G.W. Effect of dilution with saline and phosphate solution on oxygen uptake of bull semen. Amer. J. Physiol., 181: 114-8, 1955.
0462. BLACKSHAW, A.W. The effect of equilibration and the addition of various sugars on the revival of spermatozoa from 79°C. Aust. Vet. J., 31: 124-8, 1955.
0463. BLACKSHAW, A.W. The effect of glycerol on the supra-vital staining of spermatozoa. Aust. Vet. J., 34: 71-6, 1958.

0464. BLACKSHAW, A.W. The effect of pH tonicity and temperature of glycerol-isotonic on the revival of ram and bull spermatozoa after freezing to 79°C. Aust. Vet. J. 36: 376, 1960.
0465. BLACKSHAW, A.W. The effect of potassium and calcium salts on the motility of ram, rabbit and bull spermatozoa. J. Physiol., 120: 465-70, 1953.
0466. BLACKSHAW, A.W. The motility of ram and bull spermatozoa in dilute suspension. J. Physiol., 36: 449-62, 1953.
0467. BONADONNA, T. La conservazione ed il trasporto dello sperma. Atti la Aduanata Vet., 4 (90): 11-4, 1939.
0468. BONADONNA, T. A new diluent for bovine semen. Zootec. Vet., 13: 182-6, 1958.

0469. BONADONNA, T. Present knowledge about the dilution of Bos taurus sēmen. Zoot. Vet., 18 (5/6): 148-64, 1962.
0470. BONADONNA, T. Problemes de la dilution du sperme de taureau. Ann. Med. Vet., 94: 362-72, 1950.
0471. BONADONNA, T. Studi e ricerche sperimentali nella diluizione e nella conservazione dello sperms bovino in particolare. Fecond. Artif., Milano, 3: 2-10, 1941.
0472. BONADONNA, T.; BERG, E.; OLGIATI, L. & POZZI, G.C. Preliminary observations on the content of fructose on the fructolysis of Bos taurus sēmen and on the correlations with fertility. Zootec. Vet., Milan, 9: 70-82, 1954.

0473. BONADONNA, T.; RODRIGUES GAPETON, M. & POZZI, G.C. Ricerche sull'impiego di acqua fontis, dilitatta oppure minerali (Gasata e non Gasata) nella preparazione dei onns trui diluitori der sperma di Bos taurus . In: INTER. CONGR. ANIM. REPROD. AND A.I., 5., Trento, 1964. Proceedings. v.4, p. 348-54.
0474. BRANTON, C.; KELLGREN, H.C. & PATRICK, T. E. The relationship between dilution rate of sêmen or the number of motile spermatozoa and fertility. J. Dairy Sci., 35: 490, 1952.
0475. BRANTON, C.; NEWSON, M.H. & PATRICK, T.E. Di luting bull sêmen on the basis of numbers of spermatozoa rather thaw by volume. J. Dairy Sci., 32: 721-2, 1949.
0476. BRANTON, C.; NEWSON, M.H.; PATRICK, T.E.; MUS GRAVE, S.D. & VAN DEMARK, N.L. Livability and fertility of bovine spermatozoa in dif ferent diluents. J. Dairy Sci., 32: 604-8, 1949.

0477. BROCHART, M. Augmentation de la durée de con
servation du sperme de taureau par dilu
tion progressive en milieu hypotonique.
Sec. Med. Vet., 127: 153-60, 1951.
0478. BROOKS, H.L.; HELLER, P.; PLASTRIDGE, W.N. ;
JUNGHERR, E.L. & ELLIOTT, F.L. Fertility
studies with streptomycin in bovine sêmen.
J. Anim. Sci., 8: 603-47, 1949.
0479. CAMPBELL, R.C. & EDWARDS, J. Sêmen diluents
in the artificial insemination of cattle.
Nature, London, 173: 637, 1954.
0480. CARRETA, A. Observations on the activity and
fertility of bull sêmen diluted with a mis
ture of sodium citrate and yolk of egg.
Zootec. Vet., 4: 828-30, 1949.
0481. CHENG, P.; CASIDA, L.E. & BARRETT, G.R. Ef
fect of dilution on motility of bull sper
matzoa and the relation between motility
in high dilution and fertility. J. Anim.
Sci., 8: 81-8, 1949.

0482. CHIEFFI, A. Spremuta di pomodori come e base per la preparazione di liquido diluente dello sperma bovino. Zoot. Vet., 14: 174-6, 1959.
0483. CHIEFFI, A. & REIS, J.M. Richerche su nuovi mestruai diluitori del materiale seminale di toro. Zoot. Vet., 15: 61-2, 1960.
0484. COMMONWEALTH BUREAU OF ANIMAL BREEDING AND GENETICS. Annotated bibliographies:diluents of cattle semen: 1965-72. Edinburg, Scotland, 1978. 147 ref.
0485. COMMONWEALTH BUREAU OF ANIMAL BREEDING AND GENETICS. Annotated bibliographies:diluents of cattle semen: 1972-7. Edinburg, Scotland, 1978. 259 ref.
0486. CONNOR, M.L. & ROBBINS, R.K. Response of sperm to antiyolk diluent sera. J. Anim. Sci., 39 (318): 220, 1974.

0487. CRAGLE, R.G.; MYERS, R.M. & WAUGH, R.K. The effect of various levels of Sodium citrate, glycerol and equilibration time on survival of bovine spermatozoa after storage at 79°C. J. Dairy Sci., 38: 508, 1955.
0488. DAMITROPOULOS, E. Données actuelles sur les milieux de dilution du sperme de taureau et criteres d'appréciation de sa valeur fécondante avant et après la congélation. In: SEMINAIRE DE SAN MINIATO, Italie, 24-5 mars, 1972.
0489. DAS, A.; RAJKONWAR, C.K. & BORGOHAIN, B.N. A comparative study on the survivability and fertility of bull spermatozoa in egg-yolk-citrate, milk and tris diluters at + 4°C. Vetol., India, 19: 19-24, 1979.
0490. DAVIS, I.S.; BRATTON, R.W. & FOOTE, R.H. Livability of bovine spermatozoa at 5°C in tris-buffered and citrate buffered yolk-glycerol extenders. J. Dairy Sci., 46: 57, 1963.

0491. DELEU, V. The use of a new sēmen diluent for freezing sēmen in straws. Molochnoe i Myasnoe Skotovodstvo, 5: 33-5, 1978.
0492. DREHER, W.H. & WEBB, J.H. A comparison of homogenized whode milk and egg yolk phosphate as diluters for bull sēmen. J. Dairy Sci., 36: 673-7, 1953.
0493. DREVIUS, L.O. Spiralization in tails of mammalian spermatozoa in hypotonic media. Nature, London, 197: 1123-4, 1963.
0494. BUBAY, M.L.; ROYCHOUDHURY, P.N. & IZUMI, T. Livability of albino and normal bull spermatozoa at 5°C in citrate, milk and tris yolk extenders. Zentralblatt fur Veterinarmedizin, 22A (8): 689-95, 1975.
0495. DUNN, H.O.; BRATTON, R.W. & HENDERSON, C. R. Fertility of bovine spermatozoa in buffered whole egg extender containing penicillin and streptomycin, sulfanilamide and added glucose. J. Dairy Sci., 36: 524-9, 1953.

0496. DUNN, H.O.; LARSON, G.L. & WILLETT, E.L. The effects of freezing bovine spermatozoa in extenders containing antibacterial agents. J. Dairy Sci., 36: 728-32, 1953.
0497. DYREND AHL, I. Some studies of the methods of freezing bull sêmen. I. The influence of different brands of glycerol on the survival of spermatozoa. Nord. Vet. Med., 6: 780-4, 1954.
0498. EASLEY, G.T.; MAYER, D.T. & BOGART, R. Influence of diluters, rate of cooling, and storage temperatures on survival of bull sperm. Am. J. Vet. Res., 3: 358-63, 1942.
0499. EASTERBROOKS, H.L. Antibiotic treatment of diluted bull sêmen used in artificial insemination. Fertil. Sterility, 2: 430-43, 1951.

0500. EL-NAGGAR, M.A. Comparative study on the activity of the phosphatase enzymes in the seminal plasma of some farm animals in Egypt. Deutsche Tierärztliche Wochenachrift, 82 (8): 322-4, 1975.
0501. ENIN, V.P. The effect of various diluent treatments and of sugars spermatozoa during freezing. Zhivotnovodstvo, 34 (9): 80-1, 1972.
0502. ERB, R.E.; MIKOTA, L.E.; FLERCHINGER, F.H. Influence of antibiotics on fertility of bull sēmen diluted with milk. J. Anim. Sci., 14: 731-8, 1955.
0503. FEJES, J. Effect of glycerin in the diluent on the activity of deep-frozen bull sēmen. Veterinastvi, 25 (7): 300-2, 1975.
0504. FIORENTINO, A. L'emploi du lait écrēme dans la dilution du sperme de taureau. In: INTER. CONGR. PHYSIOL. ANIM. REPROD., 11., 1952.

0505. FIORENTINO, A. Skim milk as a sêmen diluent.
In: INTER. CONGR. PHYSIOL. ANIM. 11., Co
penhagen, 1952. Proceedings. p. 12-20.
0506. FLIPSE, R.J.; PATTON, S. & ALMIQUIST, J.O.
Diluters for bovine sêmen. III. Effect of
lactenin and lactoperoxidase upon sperma
tozoan livability. J. Dairy Sci., 37:
1205-11, 1954.
0507. FOOTE, R.H. Fertility of bull sêmen at high
extension rates in tris buffered extenders.
J. Dairy Sci., 53: 1475-7, 1970.
0508. FOOTE, R.H. & BRATTON, R.W. The fertility of
bovine sêmen cooled with and without the
addition of citrate-sulfalamide yolk exten
der. J. Dairy Sci., 32: 856-61, 1949.

0509. FOOTE, R.H. & DUNN, H.O. Motility and fertility of bull sêmen extended at high rates in yolk extender containing catalase. J. Dairy Sci., 45: 1237-41, 1962.
0510. FOSGATE, O.T. & TYLER, W.J. Surface active agents as constituents of diluents for deep freezing of bovine spermatozoa. J. Dairy Sci., 40: 647-51, 1957.
0511. FOULKES, J.A. Fertilidade del ganado lechero despues de la inseminacion artificial con sêmen congelado en un diluent lipoproteico. Gen. y Reprod., 2 (5): 25-7, 1978.
0512. FOULKES, J.A. The separation of lipoproteins from egg yolk and their effect on the motility and integrity of bovine spermatozoa. J. Reprod. Fertil., 49 (2): 277-84, 1977.

0513. FOULKES, J.A. & GOODEY, R.G. Bovine fertility following artificial insemination with sêmen frozen in diluent containing B-amy-lase and B-glucuronidase. Br. Vet. J., 136 (4): 331-8, 1980.
0514. FOULKES, J.A.; GOODEY, R.G. & STEWART, D. L. Fertility of bovine sêmen frozen in four diluents for use in artificial insemination. Vet. Rec., 101 (9): 171, 1977.
0515. FOULKES, J.A.; GOODEY, R.G. & STEWART, D.L. Lactose based in cattle. Vet. Rec., 101 (16): 336, 1977.
0516. FOULKES, J.A. & STEWARTH, D.L. Fertility of dairy cattle after artificial insemination with sêmen frozen in a lipoprotein dilu-ent. J. Reprod. Fert., 51 (1): 175-7, 1977.
0517. FRITSCH, W. Action of hyaluronidase on dilu-ted sêmen in vitro. Hannover, 1952. Inau-gural dissertation.

0518. GASSNER, F.X.; RUTHERFORD, E.R.; HOPWOOD, M.L.
& HILL, H.J. Effect of contraction and steroid
therapy on seminal plasma with respect
to fructose utilization by normal bull
sperm. Proc. Soc. Exp. Biol. N.Y., 81:
43-9, 1952.
0519. GEORGIEV, G.K.; YOSIFOV, K. & TSEKOVA, E. Fruc
tose and fructolysis of bull's sêmen. Nau
ki, Bulgaria, 12 (5): 27-31, 1975.
0520. GLOGOWSKI, J. & STRZEZEK, J. Some biochemical
properties during alkaline phosphatase du
ring the freezing of bull sêmen. Medycyna
Weterynaryjna, 35 (3): 179-82, 1979.
0521. GOFFAUX, M.; TOURNEURS, J.C. & BAUDET, J. Fer
tilizing ability of bull sêmen diluted in 2
media (Laiciphos - 231 and Tris) an estima
tion of its quality by different methods in
cluding a photographic test. Elevage et
Insem., 129: 3-14, 1972.

0522. GRIFFIN, J.F.T.; HARTIGAN, P.J. & NUNN, W.R.
Antibodies to egg-yolk sēmen diluent and
bovine in fertility: preliminary report.
Vet. Rec., 92 (18): 481-2, 1973.
0523. GRIFFIN, J.F.T.; HARTIGAN, P.J. & NUNN, W.R.
An immune response to egg-yolk sēmen di
luent in dairy cows. J. Reprod. Fert.,
25: 193-9, 1971.
0524. HAFS, H.D. & ELLIOT, F.L. The effects of me
thods of adding egg yolk and monosachari
des on the survival of frozen bull sperma
tozoa. J. Dairy Sci., 38: 811-5, 1955.
0525. HAHN, J. Glycine as an additive to bull sē
men. Zuchthyg Fortpfl. Störung u. Besa
mung, 1: 349-51, 1957.
0526. HAHN, J. Zun verdunnungsgrad des bullensper
mas in TG-N2. Verfahren Tierarztl.Umsch.
21: 164-71, 1966.

0527. HARRISON, R.A.P.; DOTT, H.M. & FOSTER, G. C.
Effect of ionic strength serum albumin
and other macromolecules on the maintainance
of motility and the surface of mammalian
spermatozoa in the simple medium.
J. Reprod. Fert., 52 (1): 65-73, 1978.
0528. HENNAUX, L.; DAMITROPOULOS, E. & CORDIEZ, E.
The effect of streptomycin on the vitality
of bull sêmen. C.R. Soc. Biol., Pa
ris, 141: 1272-4, 1947.
0529. HERRICK, J.B. The effect of homogenization,
pasteurization and lyophilization on
egg-yolk sodium citrate diluents for bull
sêmen. Amer. J. Vet. Res., 11: 159-60,
1950.
0530. HOELZER, H. A contribution on the dilution
of bull sêmen. Dtsch. Tierarztl. Wschr.,
55: 36-9, 1948.

0531. HOLT, A.F. The effect of glycerolisation of bull sēmen of fertility. Vet. Rec., 65: 624-5, 1953.
0532. HOLT, A.F. Variation in diluter composition and its effect on the fertility of bovine sēmen. Vet. Rec., 64: 818, 1952.
0533. HUMPHREY, G.F. & MANN, T. Citric acid in sēmen. Nature, London, 161: 352-3, 1948.
0534. HUNTER, W.K. Glycerolisation and freezing techniques with bull sēmen. In: CONGR. INTER. REPROD. ANIM. AND A.I., Paris, 6., 1968. v.2, p. 1053-6.
0535. HURST, V. Dilution of bull sēmen with frozen egg yolk-sodium citrate. J. Dairy Sci., 36: 181-4, 1953.
0536. HURST, V. & LAMASTER, J.P. Results of inseminating dairy cows with sēmen diluted with phosphate, citrate and Orthobuffers. J. Anim. Sci., 7: 541, 1948.

0537. IBRAHIM, M.M. & IYER, C.P.N. Effect of adminis-
tration of potassium iodide on sex desire
and sêmen characteristics of breeding bulls.
Kerala J. Vet. Sci., 4 (2): 178-80, 1973.
0538. IDRIS, O.E. Hanover-thawing solution (HTS) a
new thawing solution which guarantees good
fertilising capacity of thawed pelleted bull
sêmen: preliminary report. Deutsche Tie-
rarztliche Wochenschrift, 78 (15): 417-9,
1971.
0539. IVANOV, A.T. & MALINOVSKII, I.F. Immunological
reactivity of cows to egg yolk (as used in
sêmen diluents). Trudy Belorusskii Nauchno-
issledovatel'skii Vet. Inst., 12: 153-5,
1974.
0540. JACQUET, J. Recherches sur quelques milieux bio-
logiques des taureaux. Bull. Acad. Vet.,
France, 24: 429-32, 1951.

0541. JACQUET, J. & CASSOU, R. Skim milk as a diluent for bull sēmen. Bull. Acad. Vet. Fr., 25: 149-56, 1952.
0542. JAHNEL, J. Agglutination of spermatozoa in yolk citrate sēmen diluent. Wien. Tierarztl. Mschr., 41: 486-96, 1954.
0543. JAKOBSEN, K.F. & MANN, T. Biochemical appraisal of a milk diluent for sēmen. J. Agric. Sci., 54: 166-9, 1960.
0544. JASKOWSKI, L. Preservation of bull sēmen diluted with yolk citrate, yolk glucose citrate and bioled skim milk. Roezn. Nauk. Rol. Ser. E., 67: 409-24, 1956.
0545. JASKOWSKI, L. & FOOTE, R.H. Nondialyzable skimmilk in diluents for ram bull sēmen. J. Dairy Sci., 55 (6): 856-61, 1972.

0546. JONDET, R. Pouvoir fécondant du sperme de taureau conservé dans l'azote liquide. C.R. Acad. Agric. France, 2: 125-9, 1961.
0547. KALEV, G.; DOICHEV, S.; DJAMBAZOV, G.; ZAGORSKI, D.; SERTEV, M. & ZHEKOV, G. Etude sur la dilution optimale en insémination artificielle bovine (en Sofia (Bulgarie)). Bull. Inst. Biol. Pathol. Reprod. Anim., 4: 83-95, 1963.
0548. KAMPSCHMIDT, R.F.; MAYER, D.T. & HERMAN, H.A. Lipid and lipoprotein constituents of egg yolk in the resistance and storage of bull spermatozoa. J. Dairy Sci., 36: 733-42, 1953.
0549. KAMPSCHMIDT, R.F.; MAYER, D.T. & HERMAN, H.A. & DICKERSON, G.E. Viability of bull spermatozoa as influenced by electrolyte concentration, buffer efficiency and added glucose in storage media. J. Dairy Sci., 34: 45-51, 1951.

0550. KINNEY, W.C. & VAN DEMARK, N.L. The effect of yolk and citrate levels and stage of maturity on the survival of bull sperm at sub-storage temperatures. J. Dairy Sci., 14: 1426-8, 1968.
0551. KOK, J.C.N. The comparison of sēmen diluents in the field. Tijdschr. Diergeneesk., 79: 822-8, 1954.
0552. KOK, J.C.N. Effect of fructose in sēmen diluent on the motility and fertility of bull spermatozoa. Tijdschr. Diergeneesk., 82: 63-75, 1957.
0553. KPZŁOWSKA, L.; JUSZKIEWICZ, T.; STEC, J. & JASKOWSKI, L. Effect of sēmen diluents containing DDT-contaminated egg yolk on the survival of bull spermatozoa in vitro. Polskie Arch. Weterynaryjne, 17 (4): 683-90, 1975.

0554. LAPLAUD, M. & CASSOU, R. Sur la production de trois veaux normands, a l'aide de sperme de taureau recueilli electriquement diluê, conservê et transportê. C.R. Acad. Sci., Paris, 229: 629-30, 1949.
0555. LEIDL, W. & SCHRÖDL, M. Glycine as an additi
ve toull sêmen diluents. Zuchthyg Fortpfl.
Storung. u. Besamung., 2: 363-5, 1958.
0556. LINFORD, E.; STEWART, D.L. & HEBERT, C.N. The
assition of hydrolytic to bull diluents over
a range of spermatozoan concentration. Bri
tish Vet. J., 133 (1): 9-16, 1977.
0557. LOVELOCK, J.E. & POLGE, C. The immobilization
of spermatozoa by freezing and thawing and
the protective action of glycerol. Biochem.
J., 58: 618-22, 1954.

0558. LYCZYNSKI, A. & BARTKOWIAK, S. Determination of the fertility of frozen sêmen containing a diluent with the TES NAK buffer. Medycyna Weterynaryjna, 33 (6): 362-4, 1977.
0559. MACKLE, N. Use of a separated milk - glycerin sêmen diluent. Berl. Munch. Tierarztl. Wschr., 74: 374-7, 1961.
0560. MAC MILLAN, K.L. & HART, N.L. Effects of a low concentrations of cetyltrimethylammonium bromide on diluted bovine spermatozoa. Aust. J. Biol. Sci., 30 (4): 297-302, 1977.
0561. MAC MILLAN, K.L.; HART, N.L. & SHANNON, P. The redilution of deep frozen bull sêmen. Anim. Prod., 26 (1): 67-73, 1978.
0562. MAC PHERSON, J.W. Goat's milk as a sêmen diluent. Canad. J. Comp. Med., 21: 161-2, 1957.

0563. MANN, T. Dosage du fructose du sperme. Lancet, 254: 446, 1948.
0564. MANN, T. Fructose content and fructolysis in sēmen: practical application in the evaluation of sēmen quality. J. Agric. Sci., 38: 323-31, 1948.
0565. MANN, T. Fructose: a constituent of sēmen. Nature, London, 157: 79, 1946.
0566. MANN, T. Methodes colorimētriques de dosage du fructose. Proc. Soc. Study of Fertility, 3: 50, 1952.
0567. MANN, T. Mise en évidence du fructose dans le sperme et isolement (mēthodes chimiques). Biochem. J., 39: 458, 1945.
0568. MARSHALL, C.E.; SAACKE, R.G. & WHITE, J. M. Effect of glycine diluters on the acrosomal cap of bovine spermatozoa. J. Dairy Sci., 51: 950, 1968.

0569. MARTIN, I.C.A. The influence of diluents and processing time after ejaculation on the revival of deep-frozen bull spermatozoa . J. Agric. Sci., 61: 55-63, 1963.
0570. MASOTTI, N. & BARNABE, R.C. Diluidores vege-
tais para sêmen dos animais domésticos.
III. Infuso de folhas fenadas de alfafa
Medicago sativa e de folhas fenadas de gan-
du Cajanus sp como diluidores do sêmen de
bovinos. Rev. Fac. Med. Vet., 7 (2) :
401-7, 1965.
0571. MATOUSEK, J. Seminal vesicle fluid substan-
ce of bulls sensitizing spermatozoa to cold
shock. In: CONGR. INTER. REPROD. ANIM.
AND A.I., 6., Paris, 1968. Proceedings.
v.1, p. 553-5.
0572. MELROSE, D.R. Evaluation of sêmen quality by
the fructose utilization test. Brit. Vet.
J., 108: 260-8, 1952.

0573. MELROSE, D.R. Sêmen dilution rates in relation to handing technique. Vet. Rec., 64: 124-5, 1952.
0574. MELROSE, D.R.; STEWART, D.L. & BRUCE, W. Comparative fertility studies of sêmen bovine diluents containing powdered skim milk fresh, skim milk glycine and egg yolk. Vet. Rec., 70: 433-8, 1958.
0575. MICHAJLOV, N.N. Sperm dilution in the milk. J. Amer. Vet. Med. Assoc., 117: 337, 1950.
0576. MIES FILHO, A. Principios que reagem a diluição e a conservação do sêmen. Zootecnia, 6 (4): 5-32, 1968.
0577. MILLER, W.J. & VAN DEMARK, N.L. The influence of glycerol level, various temperature aspects and certain other factors on the survival of bull spermatozoa at sub-zero temperatures. J. Dairy Sci., 37: 45-51, 1954.

0578. MILONAVOV, V.K. A new class of synthetic media for sêmen. In: INTER. CONGR. ANIM. REPROD. AND A.I., 5., Trento, 1964. Proceedings. v.6, p. 135-8.
0579. MIXNER, J.P. Penicillin and sulfanilamide sêmen dilutors and their effect on fertility of sêmen from relatively fertile bulls. J. Dairy Sci., 32: 722, 1949.
0580. MIXNER, J.P. Vital studies on bull sêmen using triphenyltetrazolium chloride. J. Dairy Sci., 32: 1013-5, 1949.
0581. MIXNER, J.P. & SAROFF, J. Interference by glycerol with differential staining of bull spermatozoa as used with sêmen thawed from the frozen state. J. Dairy Sci., 37: 1094-8, 1954.

0582. MORSTIN, J.; ZIELINSKI, W.; SZALAYKO, T. & LAMPERSKI, B. Biological tests of the suitability of sēmen diluents with extended storage time for artificial insemination. Medycyna Weterynaryjna, 31 (10): 601-3, 1975.
0583. MORSTIN, J.; ZIELINSKI, W.; SZALAYKO, T. & LAMPERSKI, B. Results of biological tests after use of a diluent, stored for a long time, for insemination. Medycyna Weterynaryjna, 31 (11): 1021-8, 1975.
0584. MULLER, E. Effect of different diluents on motility and post freezing survival of bovine spermatozoa. In: INTER. CONGR. ANIM.REPROD. AND A.I., Munich, 1972. Proceedings. p. 261.
0585. NAGASE, H. & GRAHAN, E.F. Pelleted sēmen: the effect of glycerol level and composition of thawing solutions on fertility of bovine spermatozoa. In: INTER. CONGR. ANIM.REPROD. AND A.I., Trento, 5., 1964. Proceedings. v.6, p. 404-9.

0586. NAGASE, H.; YAMASHITA, S. & IRIE, S. Protective effects of sugars against freezing injury to bull spermatozoa. In: INTER. CONGR. ANIM. REPROD. AND A.I., 6., 1968. Proceedings. v.2, p.1111-3.
0587. NAIDU, M.; BENJAMIN, B.R. & ANSARI, M.R. Comparative studies on the conception rates of cattle inseminated by sêmen preserved in various diluents. Br. Vet. J., 136 (4) : 384-7, 1980.
0588. NISHIKAWA, Y.; WAIDE, Y. & OTSULI, K. The improvement of egg yolk buffer solution for bull sêmen and the use of ampoule to keep it. Bull. Nat. Inst. Agric. Sci., Sêrie g, 11: 67-79, 1955.
0589. NORMAN, C. & RAO, A.S.P. Comparison of motility and fertilizing capacity of buffalo and cattle sperm preserved at ambient temperature in coconut milk extender. In: INTER. CONGR. ANIM. REPROD. AND A.I., 7., Munich, 1972. p. 257.

0590. OLDS, D.; OLIVER, L. & SEATH, D.M. The fertility of bull sêmen extended with yolk citrate containing varying proportions of egg yolk. J. Dairy Sci., 34: 1081-3, 1951.
0591. PACE, M.M. & GRAHAM, E.F. Components in egg yolk which protect bovine spermatozoa during freezing. J. Anim. Sci., 39: 1144-9, 1974.
0592. PAVLENKO, M.P. The effect of egg yolk on bull spermatozoa. Referativnyi Zhurnal. 8 (58): 428, 1978.
0593. PERKINS, J.R.; CARPENTER, M. & SEATH, D.M. A comparison of the fertility of bull sêmen diluted in egg yolk-citrate and homogenized milk. J. Dairy Sci., 38: 155-8, 1955.
0594. PHILLIPS, P.H. & LARDY, H.A. A yolk buffer pabulum for the preservation of bull sêmen. J. Dairy Sci., 23: 399-401, 1940.

0595. PICKETT, B.W.; COWAN, W.A.; FOWLER, A.K. & GOSLEE, D.G. A comparison of motility and fertility of bull sêmen and fertility of bull sêmen extended in egg yolk- citrate - glycerol and skim milk-egg yolk glycerol. A.I. Digest., 8: 6, 1960.
0596. PURSLEY, G.R. & HERMAN, H.A. Some effects of hypertonic and hypotonic solutions on the livability and morphology of bovine spermatozoa. J. Dairy Sci., 33: 220-7, 1950.
0597. PURSLEY, G.R. & HERMAN, H.A.; DICKENSHECT, M. & WATERS, R.E. A comparison of various sêmen diluters in maintenance motility of bovine spermatozoa. J. Dairy Sci., 33: 216-9, 1950.
0598. PURSLEY, G.R. & HERMAN, H.A. & WATERS, R.E. A comparison of various sêmen diluters in maintenance motility of bovine spermatozoa: complementary review. J. Dairy Sci., 34: 111-8, 1951.

0599. RAJAMANNAN, A.H.; GRAHAM, E.F. & SMITH, F. The effect of a new extender incorporating dried egg yolk on the fertility of bovine. In: INTER. CONGR. ANIM. REPROD. AND A.I., 5., Trento, 1964. Proceedings v.4, p. 392-7.
0600. RAMADAS, K.; IYER, C.P. & RAJA, C.D.S.V. A preliminary report on the effect of honey as a constituent in sēmen extenders. Kerala J. Vet. Sci., 10 (1): 85-8, 1979.
0601. RAO, D.N.; RATAN SINGH, A.; TRIPATHI, S.S. & SAXENA, V.B. A note on preservation of Jersey bull sēmen at room temperature in coconut milk sēries diluents. Indian J. Anim. Sci., 45 (7): 493-4, 1977.
0602. RAO, D.N.; RATAN SINGH, A.; TRIPATHI, S.S. & SAXENA, V.B. Preservation of Jersey bull sēmen at ambient temperature in Russian dilutor. Indian Vet. J., 59 (9): 689-93, 1976.

0603. RASBECH, N.O. The influence of antibiotics on breakdown of fructose in diluted sēmen. Nord. Vet. Med., 5: 193-210, 1953.
0604. ROHLOFF, D.; FISCHER, A. & FISCHER, P.C. Experience with the SCL7 - diluent in insemination trials on bull under field conditions. Ber. Munchener Tierarztliche Wochenschrift, 93 (10): 189-91, 1980.
0605. ROSE, M. Use of diluted sea water in a diluent for bull sēmen. C.R. Acad. Sci., Paris, 245: 382-3, 1957.
0606. ROSTAND, J. Glycérine et résistance du sperme aux basses températures. C.R. Acad. Sci., Paris, 222: 1524-5, 1946.
0607. ROTHSCILD, M.G. Anaerobic heat production of bull spermatozoa. II. The effect of changes in the colligative and other properties of the suspending medium. Proc. Roy. Soc. Ser. B., 151: 1-22, 1959.

0608. ROTHSCCHILD, M.G. & BARNES, H. Osmotic pressure of bull sēmen diluents. Nature, London, 193: 636-7, 1954.
0609. ROTTENSTEN, K. Comparison of sēmen diluted 1:8 and 1:16. II. Potency of fresh sēmen and of sēmen one day old. Beretn. Forsogslab. Kbl., 261: 32, 1952.
0610. ROTTENSTEN, K. Use of sēmen diluted containing sulphanilamide. Beretn. Forsogslab. Kbl., 253: 1-14, 1951.
0611. ROTTENSTEN, K. & OSTERGAARD, P.S. Effect on fertility of addition of penicillin and of streptomycin to sēmen of bulls. Beretn. Forsogslab. Kbl., 265: 30, 1953.
0612. ROYCHOUDHURY, P.N. & DUBAY, M.L. Survival of bull spermatozoa in ewe milk. Zentralblatt fur Vet., A, 24 (7): 591-6, 1977.

0613. SAACKE, R.G.; ALMIQUIST, J.O. & FLIPSE, R.J.
Diluters for bovine sēmen. VII. Effects
of time and temperature of heating skim
milk upon the livability of bovine sperma
tozoa. J. Dairy Sci., 39: 90-6, 1956.
0614. SAACKE, R.G.; ROBBINS, R.K. & CHANDLER, P.T.
Effect of freeze rate thaw rate and glyce
rol level on bovine sperm frozen in
straws. In: TECH. CONF. INSEM. AND RE
PROD., 5., 1954. p. 41-6.
0615. SALISBURY, G.W. Recent development with bull
sēmen diluters. Anim. Breed. Abst., 25:
111-23, 1957.
0616. SALISBURY, G.W.; BECK, G.H.; CUPPS, P.T. &
ELLIOT, I. The effect of dilution rate
on the livability and the fertility of
bull spermatozoa used for artificial inse
mination. J. Dairy Sci., 26: 1057-69,
1943.

0617. SALISBURY, G.W. & BRATTON, R.W. Fertility level of bull sēmen diluted at 1:400 without sulfanilamide. J. Dairy Sci., 31: 817-22, 1948.
0618. SALISBURY, G.W.; ELLIOT, F.L. & VAN DEMARK, N. L. Further studies of the effect of dilution rate on the fertility of bull sēmen used artificial insemination. J. Dairy Sci., 28: 233-41, 1945.
0619. SALISBURY, G.W.; KNOTT, C.B. & BRATTON, R.W. The freezing point depression of bull sēmen and its relation to the diluter problem. J. Anim. Sci., 7: 283-90, 1948.
0620. SALISBURY, G.W. & WILLET, E.L. Preservation of bovine spermatozoa in yolk: citrate diluent and field results from its use. J. Dairy Sci., 24: 905-10, 1941.

0621. SAMALA, B.J.R.; TUANQUI, R.C. & LU, T. A preliminary study on the preservation of bull sêmen in the yolk of infertile fresh chicken (Pullet) egg. In: INTER. CONGR. ANIM. REPROD. AND A.I., 5., Trento, 1964. v.4, p. 458-62.
0622. SANFILE, V. Milk as a sêmen diluent: preliminary note. Zooprofilassi, 7: 257-9, 1952.
0623. SAXENA, V.B. & TRIPATHI, S.S. Unsuitability of preservation of bull sêmen in coconut milk extender and Russian dilutor at refrigerator temperature. Pantnagar J. Res., 2 (2): 192-4, 1977.
0624. SCHINDLER, H. & VOLCANI, R. The influence of sodium salicylate and sodium benzoate on the span of sperm cells in diluted bull sêmen. Refuah Vet., 10: 10-5, 1953.

0625. SEHR, G. Improvement of the first insemination rate after insemination with pellet - frozen bull sēmen using a thawing solution containing glucose sodium-citrate. Deutsche Tierärztliche Wochenschrift, 82 (11): 441-2, 1975.
0626. SHANNON, P. Contribution of seminal plasma sperm numbers and gasphase to dilution effects of bovine spermatozoa. J. Dairy Sci., 48: 1357-61, 1965.
0627. SHANNON, P. & CURSON, B. The effect of egg yolk levels in bovine seminal plasma and dead sperm toxins. In: INTER. CONGR. ANIM. REPROD. AND A.I., 6., Munique, 1972. Proceedings. v.2, p. 1315-7.
0628. SIMONETTA, R.; MOLINARI, G. & PANAZZOLO, A. L'omogeneizzazione del Rosso d'Covo nella preparazione del diluente seminale Rosso d'Uovo: citrato primi risultati nella fecondazione artificiale degli bovini. In: INTER. CONGR. ANIM. REPROD. AND A.I., 5., Trento, 1964. v.4, p. 332-4.

0629. SMITH, J.T.; MAYER, D.T. & HERMAN, H.A. A comparison on the ability of certain egg yolk diluters to maintain optimum osmotic conditions during the storage of bull sēmen. J. Dairy Sci., 37: 684-90, 1954.
0630. STALLCOP, O.T. & MC CARTNEY, H.K. Toxicity to bull spermatozoa of renamycin hidrochloride and its use as an antibacterial agent in diluents. J. Dairy Sci., 36: 293-5, 1953.
0631. STEHLE, E. Carbonic acid for preservation of sēmen. Tierarztl. Umsch., 13: 367-70, 1958.
0632. STEINBACH, J. & FOOTE, R.H. Effect of catalase and anaerobic conditions upon the post-thawing survival of bovine spermatozoa frozen in citrate and Tris-buffered yolk extenders. J. Dairy Sci., 47: 812, 1964.

0633. STEINBACH, J. & FOOTE, R.H. Post-thaw survival of bovine spermatozoa frozen by different methods in buffered yolk and skim milk extenders. J. Dairy Sci., 47: 909, 1964.
0634. STEWART, D.L.; MELROSE, D.R. & WILSON, W.R. The effect of streptomycin on the fertility of bull sêmen. Vet. Rec., 63: 609-12, 1951.
0635. STEWART, D.L. & WILSON, W.R. The effect of reducing the quantity of egg yolk in bovine sêmen diluents. Vet. Rec., 62: 617-8, 1950.
0636. STOLBOV, S.M. & ERSHOV, V.I. Increasing the fertilising ability of frozen-thawed bull spermatozoa by the addition of biostimulators to the diluent. Referativnyi Zhurnal, 3 (58): 418, 1979.

0637. STOWER, J. & BUD-HUSAIM, P. Conception rates with bull sēmen diluted in a glycerolized glycine-egg yolk-fructose buffer. J. Agric. Sci., 49: 220-2, 1957.
0638. STOWER, J. & CEMBROWICZ, H.J. The influence of glycerol on the fertility of bovine sēmen diluted in skim milk-egg yolk buffer. In: INTER. CONGR. ANIM. REPROD. 4., The Hague, 1961. v.4, 919.
0639. STOYANOV, T. & KOSTADNOV, B. Results of freezing bull sēmen in a raffinose-yolk diluent without glycerol. Vet. Nauki, 15: 47-54, 1978.
0640. STROM, S. Comparison of the effect of egg yolk-citrate and egg-yolk-glycine diluents on the fertilizing ability of bovine sēmen. In: INTER. CONGR. ANIM. REPROD., 3., Cambridge, 1956. Proceedings. p. 71-2.

0641. SWANSON, E.W. The effect of varying proportions of egg yolk and sodium citrate buffer in bull sēmen diluters upon sperm motility. J. Dairy Sci., 32: 345-52, 1949.
0642. SWANSON, E.W. & WHITE, R.H. The effect dilution temperatures and cooling rates upon the survival of frozen and unfrozen sperm. J. Dairy Sci., 39: 921, 1956.
0643. SYKES, J.C. & MIXNER, J.P. Toxicity to bull spermatozoa of various salts, brands and lots of penicillin, streptomycin, aureomycin and chloromycetin. J. Dairy Sci., 34: 342-6, 1951.
0644. THACKER, D.L. & ALMIQUIST, J.O. Diluters for bovine sēmen. I. Fertility and motility of bovine spermatozoa in boiled milk. J. Dairy Sci., 36: 173-80, 1953.

0645. TOMAR, N.S.; SHARMA, K.C.; SHARMA, K.B.; SRI VASTAVA, K.N. & SINGH, B.P. The role of ascorbic acid and cysteine hydrochloride on fertility rates of liquid sēmen. In dian Vet. J., 56 (3): 163-7, 1979.
0646. TYLER, A. & TANABE, T.Y. Motile life of bovine spermatozoa in glycine and yolk citrate diluents at high and low temperatures. Proc. Soc. Exp. Biol., N.Y. 81: 367-71, 1952.
0647. ULACHOS, C. Cows' milk as a diluent for bull sēmen. Delt. Hellen. Hetair., 21 (5): 23-30, 1952.
0648. ULLNER, W. Comparison of sēmen diluents. Tierarztl. Umsch., 8: 275-7, 1953.
0649. UNAL, M.B.; BERNDTSON, W.E. & PICKET, B.W. Influence of sugars with glycerol on post-thaw motility of bovine spermatozoa in straws. J. Dairy Sci., 61 (1): 83-9, 1978.

0650. UNDERBJERG, G.K.L.; DAVIS, H.P. & SPANGLER, R.
E. Effect of diluters and storage upon fe
cundity of bovine sêmen. J. Anim. Sci.,
1: 149-54, 1942.
0651. VALENCIA ZARAZUÁ, M. Influência de las propor
ciones de dilucion y del nível de yema de
huervo durante del esfriamiento y congela
cion de espermatozôides bovinos en palestas.
Genética y Reprod., 2 (5): 21-2, 1978.
0652. VALENCIA ZARAZUÁ, M.; BERNDTSON, W.E. & PI
CKETT, B.W. Influence of seminal dilution
ratios and level of egg yolk during cooling
and freezing of bovine spermatozoa in
straws. J. Anim. Sci., 45 (6): 1368-74,
1977.
0653. VAN DEMARK, N.L. & BARTLETT JUNIOR, F.D. Pro
longed survival bovine sperm in the illini
viriable temperature diluent. J. Dairy
Sci., 41: 732, 1958.

0654. VAN DEMARK, N.L. & SHARMA, U.D. A preliminary report on preservation of bovine sêmen at room temperature. J. Anim. Sci., 13: 1212, 1956.
0655. VAN DIETEN, S.W.J. Influence of penicillin and streptomycin in sêmen diluents on the fertilizing capacity of sêmen. Tijdschr. Diergeneesk., 78: 419-30, 1953.
0656. VAN TIENHOVEN, A.; SALISBURY, G.W.; VAN DEMARK, N.L. & HANSEN, R.G. The preferential utilization by bull spermatozoa of glucose as compared to fructose. J. Dairy Sci., 35: 637-41, 1952.
0657. VEIGA, J.Y. Gelatinização do esperma para fins de transporte e de inseminação. Bol. Ass. Ex. Alunos Esc. Sup. Agron. Viçosa, Minas Gerais, 8-9, 1945/6.
0658. VENGUST, M.; SENEGACNIK, J. & GRABLJEVEC, A. The vitability of thawed bull sêmen as assessed by the thermoresistance and coffee test. In: INTER. CONGR. ANIM. REPROD. AND A.I., 9., Span, 16-20 June, 1980. p. 282.

0659. VIVANCO, W. & ANDUAGA, J. Uso de los diluyo conservadores citrato yema y tris en la congelacion del sêmen de toro. In: INTER. CONGR. REPROD. AND A.I., 9., Span, 16-20, june, 1980. p. 379.
0660. VOLCANI, R. & BERMAN, A. The influence of whole blood, serum or plasma on bull sêmen. Refuah Vet., 10: 139-43, 1953.
0661. WASS, K.; HEDEBRO-VELANDER, I. & SWENSSON, T. Effect of different extenders and processing techniques on the non-return rate of deep frozen bull sêmen. In: INTER. CONGR. REPROD. ANIM. AND A.I., 9., Span, 16-20 June, 1980. Proceedings. p. 380.
- ,0662. WHITE, I.G. The effect of potassium on the washing and dilution of mammalian spermatozoa. Aust. J. Exp. Biol. Med. Sci., 31: 193-200, 1953.

0663. WHITE, I.G. The effect of some seminal constituents and related substances on diluted mammalian spermatozoa. Aust. J. Biol. Sci., 7: 379-90, 1954.
0664. WHITE, I.G. Studies of the spermicidal activity of chelating agents. Aust. J. Biol. Sci., 8: 387-95, 1955.
0665. WHITE, I.G. The toxicity of heavy metals to mammalian spermatozoa. Aust. J. Biol. Sci., 33: 359-66, 1955.
0666. WHITE, I.G. The toxicity of some antibiotics for bull, ram, rabbit and human spermatozoa. Aust. J. Exp. Biol. Med. Sci., 32: 41-8, 1954.
0667. WIGGIN, H.B. & ALMIQUIST, J.O. Combinations of glycerol percent, glycerol equilibration time and rate upon freezability of bull spermatozoa plastic straws. J. Dairy Sci., 58: 416-9, 1975.

0668. WILLET, E.L. Fertility of bull sêmen diluted:
1:100 and 1:300 with and without antibio
tics. In: INTER. CONGR. PHYSIOL. ANIM. RE
PROD., 1., Copenhagen, 1952. Proceedings.
p. 126-9.
0669. WILLET, E.L. Fertility and livability of bull
sêmen diluted at various levels to 1:300.
J. Dairy Sci., 33: 43-9, 1950.
0670. WILLET, E.L. & LARSON, G.L. Fertility of bull
sêmen as influenced by dilution level, an
tibiotics, spermatozoan numbers and the in
teraction of these factors. J. Dairy
Sci., 35: 899-905, 1952.
0671. WILLET, E.L. & SALISBURY, G.W. The effect of
various diluters, cooling rate, temperatu
re of storage, and some other factors on
the livability of spermatozoa in stored
samples of bull sêmen. Men. Cornell
Agric. Exp. Sta., 249: 45, 1942.

0672. YABLONSBII, V.A. & PLAKLTil, P.D. Antigenic properties of egg yolk in the spermatozoa agglutination reaction. Veterinariya, Moscow, 12: 86-8, 1975.
0673. YASSEN, A.M. & FOOTE, R.H. Bull sēmen in centrifuged or dialyzed and reconstituted brifered egg yolk extenders. J. Dairy Sci., 50 (9): 1485, 1967.
0674. ZIELINSKI, W.; MORSTIN, J. & PIETRASZER, A. Long-life diluent for preservation of bull sēmen. Medycyna Weterinaryjna, 31 (9) : 541-3, 1975.
0675. ZODER, H.F. Preservation of bull sēmen with carbon dioxide. Munich, Inaugural Dissertation, 1958.

ESTOCAGEM DO SÊMEN

0676. AAMDAL, J. & ANDERSEN, K. Fast thawing of bull sêmen frozen in straws. In: INTER. CONGR. REPROD. ANIM. AND A.I., 6., Paris, 1968. Proceedings. v.2, p. 973-6.
0677. ADLER, H.C. The breeding capacity of bull sêmen stored for one day. Nord. Vet. Med., 10: 644-52, 1958.
0678. ADLER, H.C. Deep freezing of bovine in cel lophane straws and storage in liquid air. Arsberetning, Den Kgl Vet., - og Landbo hojskoles Sterilitetsforsk, 243, 1960.
0679. ADLER, H.C. Freezing of bovine sêmen in straws with coldgas generator and storage in liquid air. In: CONGR. INTER. REPROD. ANIM. AND A.I., 4., Haia, 1961. v.4, p. 947-51.

0680. ALIM, M.A. & HASNATH, M.A. Room temperature preservation of bovine sêmen in Cornell University extender. Bangladesh Vet. J., 11 (1/4): 15-9, 1977.
0681. ALMIQUIST, J.O. & LANDA, C.A. A new method for freezing large numbers of straws of bull sêmen. J. Anim. Sci., 49: 1190-4, 1979.
0682. ALMIQUIST, J.O. & WIGIN, H.B. Effect of different combinations of freezing and thawing rates upon survival of bull spermatozoa in U.S. plastic straws. A.I.Digest., 21: 10-1, 1973.
0683. ANDERSON, J. & PEDERSEN, H. Breeding efficiency of frozen bull sêmen after 5 years storage at 196°C in liquid nitrogen. In: INTER. CONGR. ANIM. REPROD. AND A.I., 8., Cracow, 1976. Proceedings. v.4, p.783-6.

0684. ARBEITER, K.; KARSCH, E. & ARBEITER, E. Adverse effects on deep frozen semen of the bull by storage and manipulation under practical conditions. Zuchthygiene, 15 (2): 60-6 , 1980.
0685. AYYAR, R.V. Preservation of bovine spermatozoa. Indian Vet. J., 20 (5): 253-60 , 1944.
0686. BARKER, C.A.V. Low temperature preservation of bovine epididymal spermatozoa. Canad. J. Comp. Med., 18: 390-3, 1954.
0687. BERNDTSON, W.E. & FOOTE, R.H. Bull sperm survival following freezing in Ampules, pellets and straws. In: INTER. CONGR. ANIM. REPROD. AND A.I., 7., 1972. v.2, p. 1353-6.
0688. BERNDTSON, W.E. & PICKETT, B.W. El envase del semen. Pract. Bovina, 1 (3): 11, 1980.

0689. BLACKSHAW, A.W. Factors affecting the revival of bull and ram spermatozoa after freezing to 79°C. Aust. Vet. J., 31: 238-41, 1955.
0690. BLACKSHAW, A.W. & EMMENS, C.W. Survival of deep-frozen mammalian spermatozoa. Vet. Rec., 65: 872, 1953.
0691. BRANTON, R.W.; FLOOD, J.C.; FOOTE, R.H.; WEARDEN, S. & DUNN, H.O. Fertility spermatozoa stored at minus 79°C for one week and for seventeen weeks. J. Dairy Sci., 40: 154-62, 1957.
0692. BRUCE, W. The application of the low temperature storage of bull semen for artificial insemination. In: INTER. CONGR. ANIM. REPROD., 3., Cambridge, 1956. Proceedings. p. 27-9.
0693. BUCH, N.C.; SMITH, V.R. & TYLER, W.J. Bull and line differences in the survival of spermatozoa after freezing and thawing. J. Dairy Sci., 39: 1712-6, 1956.

0694. BURUIANA, L.M.; KHALIL, H.; SECIU, F. & NICA
LESCU, S. The influence of conservation by
congelation upon the activity of acrosin and
hyaluronidase of bull spermatozoa. In:
INTER. CONGR. ANIM. REPROD. AND A.I., 9.,
Span, 16-20 June, 1980. Proceedings. p.426.
0695. CARPENTER, B. The straw sperm package. A.I.
Digest, 19: 8-18, 1971.
0696. CASAGRANDE, J.F.; SILVA, R.G. & ALMEIDA, C.A.
Efeito do método de descongelamento sobre a
porcentagem de espermatozoides reativados
em sêmen acondicionado em ampolas de vidro
e em minitubos. Rev. Brasil.Reprod.Anim.,
1 (1): 27, 1977.
0697. CASSOU, R. La miniaturisation des paillettes.
In: INTER. CONGR. REPROD. ANIM. AND A.I.,
6., Paris, 1968. p. 1013-5.

0698. CASSOU, R. Les palettes moyennes au Centre de LAIGLE. Elevage et Insem., 97: 3-9, 1967.
0699. CHANDLER, J.E.; NEBEL, R.L.; BAHAM, A. & ADKINSON, R.W. Effect of thawing temperature and time on fertility of bovine semen packaged in 0,3 ml straws. - J. Dairy Sci., supplement 1: 85-95, 1980.
0700. CLEGG, E.D. & PICKETT, B.W. Effect of storage at 196°C on fertility. A.I. Digest, 14 (3): 12-3, 1966.
0701. CORVALAN, P. Studies on three methods of cryopreservation of bull semen. In: INTER. CONGR. REPROD. ANIM. AND A.I., 9., Span, 16-20 June, 1980. Proceedings, p. 427.
0702. COULTER, G.H. & FOOTE, R.H. Effects of package, extender and light on stored frozen bull spermatozoa. J. Dairy Sci., 60 (9): 1428-32, 1977.

0703. DEBRUYNE, R. Freezing bull sēmen : the choice of ampoules, straws or pellets. Vlaams Diergeneeskundig Tijdschrift, 46 (3): 225-31, 1977.
0704. DE GROOT, B. & HENDRIKSE, J. An experiment on the deep-freezing of sēmen. Tijdschr. Diergeneesk, 79: 910-22, 1954.
0705. DOCKE, F. & WIECHERT, W. Preservation of bull sēmen with citric acid. Zuchthyg. Fortpflstorung u. Besamung, 3: 366-72, 1959.
0706. DOROZHILOV, A.E.; STOLBOV, S.M. & NIKULENKO, V.V. Some changes in freezing regime of bull sēmen and their effect on its quality. Referativnyi Zhurnal, 7 (58): 187, 1973.
0707. DOROZHILOV, A.E.; STOLBOV, S.M. & NIKULENKO, V.V. Some problems of work with frozen bull sēmen. Zhivotnovodstvo, 10: 74-6, 1972.

0708. DUNN, H.O. & HAFS, H.D. A study of variation in the numbers of live sperm surviving freezing and six month's storage at 79°C. In: INTER. CONGR. ANIM. REPROD., 3., Cambridge, 1956. Proceedings. p. 37-9.
0709. DUNN, H.O.; HAFS, H.D.; BUCKNER, P.J.; YOUNG, G.F.; CONRAD, E.O.; WILLETT, E.L. & LARSON, G.L. Comparison of fertility of bovine spermatozoa stored at 5°C and 79°C. J. Dairy Sci., 37: 1429-34, 1954.
0710. DYRENDahl, I. The french straw: the paillette under practical conditions. Anim. Breed. Abstr., 37: 59; 1969.
0711. EMMENS, C.W. & BLACKSHAW, A.W. The low temperature storage of ram, bull and rabbit spermatozoa. Aust. Vet. J., 26: 226-8, 1950.
0712. ERICKSON, W.E. & GRAHAM, E.F. Effects of storage on non-return rate of frozen spermatozoa. A.I. Digest., 7 (5): 8-9, 1959.

0713. ESSICH, G. The low temperature conservation of bull sēmen in pellet form in plastic straws. Anim. Breed. Abstr., 36: 64, 1968.
0714. ETGEN, W.M.; DUDWICK, T.M.; RICHARD, H.E. ; HESS, E.A. & ELY, F. Use of mechanical refrigeration in preservation of bull sēmen. J. Dairy Sci., 40: 774-8, 1957.
0715. FISHER, G.R. & GRAHAM, E.F. Effect of storage temperature of bovine spermatozoa on motility and fertility. J. Dairy Sci., 44: 1183, 1961.
0716. FOOTE, R.H. Keeping quality and viability of deep frozen spermatozoa in cattle. In: INTER. CONGR. ANIM. REPROD. AND A.I., 7., Munick, 1972. Proceedings. p. 177-81.
0717. FOWLER, A.K.; PICKETT, B.W.; GOSSLEE, D.G. & COWAN, W.A. Effects of 196°C and 76°C storage on the resistance of bull sperm to three repeated freeze-thaw treatments. J. Dairy Sci., 44: 715-20, 1961.

0718. GARNER, D.L. & EHLERS, M.H. Effect of storage at 5°C on the disc electrophoretic patterns of ovine and bovine seminal proteins. J. Reprod. Fertil., 27 (1): 43-52, 1971.
0719. GRAHAM, E.F. Comments on freezing spermatozoa. In: TECH. CONF. A.I. REPROD., 1., Columbia, 1966. p. 61-3.
0720. GROOTENHUIS, G. Deep-freezing of sēmen. Tijdschr. Diergeneesk., 78: 861-9, 1953.
0721. GROOTENHUIS, G. The deep freezing method for the storage of sēmen and its use for the improvement of results from artificial insemination. Tijdschr. Diergeneesk., 79: 529-34, 1954.
0722. GRUND, S.; ROHLOFF, D. & SIMMANK, W. Freezing rates in preservation of bull sperms. In: INTER. CONGR. REPROD. ANIM. AND A.I., 9., Span, 16-20 June, 1980. Proceedings. p. 384.

0723. HEWETSON, R.W. Storage time as a factor limiting the fertilizing capacity of diluted bovine sêmen stored at 5°C. Aust. Vet. J., 31: 129-31, 1955.
0724. HUBE, A. & URIBE, H. Efecto de diferentes temperaturas de descongelacion sobre la acrosomia y motilidad progresiva en sêmen de toro. In: INTER. CONGR. REPROD. ANIM. AND A.I., 9., Span, 16-20 June, 1980. Proceedings. p. 333.
0725. IRITANI, A.; SHIRAYAMA, K. & NISHIKAWA, Y. Conception results with frozen bull sêmen stored for long term (16 years). In: INTER. CONGR. REPROD. ANIM. AND A.I., 9., Span 16-20 June, 1980. Proceedings. p. 388.
0726. ISHII, K.; YAMATA, S. & MORITA, Z. Studies on the use of bovine frozen sêmen. I. The Relationship between conception rate and deep freezing techniques. Bull. Fac. Agric., Tottori Univ., 30: 89-104, 1978.

0727. JACQUET, J.; LEMARINIER, S.; CASSOU, R. & CAS
 SOU, B. Sur la conservation de longue du
 rée des spermatozoïdes de taureau. Bull.
Acad. Vet. France, 52: 283-7, 1979.
0728. JENICHEN, W. & ZEITZ, A. Deep freezing of
 bull semen in pellet form. Zeszyty Pro
blemowe Postepow Nauk. Rolniczych, 108:
 187-9, 1971.
0729. JOKINEN, L. & LINDSTROM, U.B. Non-return ra
 tes of pellets after 4 year storage vs. 1
 year storage. In: INTER. CONGR. ANIM. RE
 PROD. AND A.I., 8., Cracow, 1976. Proce
edings. v.4, p. 808-11.
0730. JONDET, R. Adaptation to 0.20 ml straws of
 the vertical freezing method in the liquid
 nitrogen vapour phase. In: INTER. REPROD.
 ANIM. AND A.I., 7., Munich, 1972. Proce
edings. v.2, p. 1350-2.

0731. JONDET, R. Congélation rapide du sperm de taureau conditionné en pailletes. In: INTER. CONGR. REPROD. ANIM. AND A.I., 5., Trento, 1964. Proceedings. v.4, p. 463-8.
0732. JONDET, R. Conservation du sperm de taureau dans l'azote liquide. C.R. Acad. Sci., 252: 810-2, 1961.
0733. JONDET, R. Méthod simplifiée de congelation du sperm de taureau conditionne en pailletes de matière plastique. C. R. Acad. Agric., 27: 811-20, 1964.
0734. JONDET, R. Resistance des spermatozoïdes de taureau aux basses temperatures: observations sur la variabilité du comportement des ejaculats. Bull. Acad. Vet. de France, 54: 125-30, 1981.

0735. JONDET, R. & RABADEUX, Y. Quatre années de congélation rapide du taureau. In: INTER. CONGR. REPROD. ANIM. AND A.I., 6., 1968. Proceedings. v.2, p. 1057-9.
0736. JONDET, R. & RABADEUX, Y. Utilisation du forid intense pour la congélation et la conservation du sperme de taureau. Bull. Acad. France, 49: 341-72, 1976.
0737. JONDET, R.; RABADEUX, Y. & JONDET, M. Degél à des pailletes de 0.25 ml dans un bain d'eau à + 35°C influence comparée de deux temps d'immersion sur le pouvoir fécondant des spermatozoides. Elevage et Insemination, 159: 18-21, 1977.
0738. JONDET, R.; RABADEUX, Y. & JONDET, M. Degél à + 75°C et + 35°C du sperme de taureau conditionné en pailletes de 0.25 ml. Bull. Soc. Sci. Bretagne, 50: 101-6, 1975.

0739. JONDET, R.; RABADEUX, Y. & JONDET, M. The effect of freezing method and thawing temperature on the recovery of bull spermatozoa. Bull. Soc. Sci., Bretagne Sci. Nat., 49 (1-4): 41-4, 1976.
0740. JONDET, R.; RABADEUX, Y. & JONDET, M. Observations on freezability of bull ejaculates using a two-step freezing procedure. In: INTER. CONGR. REPROD. ANIM. AND A.I., 9., Span, 16-20 June, 1980. Proceedings. p. 385.
0741. JONES, R.C. & STEWART, D.L. The effect of cooling to 5°C and freezing and thawing on the ultrastructure of bull spermatozoa. J. Reprod. Fertil., 56 (1): 233-8, 1979.
0742. KALEV, G. & VENKOV, T. Sur la méthode de congélation profonde du sperme de taureau, de bélier et de bouc. In: INTER. CONGR. ANIM. REPROD. AND A.I., 4., Haye, 1961. Proceedings. p. 972-4.

0743. LARSON, G.L. & GRAHAM, E.F. Effects of low temperatures in storage of bovine sēmen. A.I. Digest., 6 (12): 6-8, 1958.
0744. LEIDL, W. Experiments in freezing drying of bull sēmen. In: INTER. CONGR. ANIM. RE PROD., Cambridge, 1956. Proceedings. p. 39-41.
0745. LEVERAGE, W.E.; VALERIO, D.A.; SCHULTZ, A.P.; KINGSBURY, E. & DOREY, C. Comparative study on the freeze preservation of spermatozoa: primate bovine and man. Lab. Anim. Sci., 22 (6): 882-9, 1972.
0746. LINDSTROM, U.; HOLMSTROM, B.G. & JOKINEN, L. Pellets: experiences and results of storage over 3 years. In: INTER. CONGR. ANIM. REPROD. AND A.I., 7., Munich, 1972. Proceedings. v.2, p. 1427-35.
0747. MACFEE, A.F. Effects of various cooling methods on spermatozoan livability. J. Dairy Sci., 42: 931, 1959.

0748. MACFEE, A.F. & SWANSON, E.W. The influence of cooling rates and storage temperatures on sperm activity. A.I. Digest., 8: 12-4, 1960.
0749. MACPHERSON, J.W. The effect of storage time on frozen bovine sêmen. Canadian J. Comp. Med., 18: 323-5, 1954.
0750. MACPHERSON, J.W. & KING, G.J. Plastic straws frozen sêmen: a field evaluation. Canadian J. Comp. Med. Vet. Sci., 30: 109, 1966.
0751. MARCHIANI, W.D. Congelacion de sêmen. Agric. Venez., 19 (179): 26-7, 1955.
0752. MARTINEZ, G.; IGLESIAS, C. & SOLANO, R. A thawing method for bull sêmen frozen in pellets. Rev. Cubana Reprod. Anim., 3 (1): 45-7, 1977.
0753. MIXNER, J.P. Fertility of bull sêmen frozen for twelve years. In: INTER. CONGR. REPROD. ANIM. AND A.I., 6., Paris, 1968. Proceedings. v.2, p. 1095-8.

0754. MIYAMOTO, H. & NISHIKAWA, Y. Super cooling in the deep freezing of bull sêmen. J. Zootech., 50 (4): 205-10, 1979.
0755. MORTIMER, W.E. Fertilidad de los espermatozôides bovinos congelados y evasados en palletes continental o en ampolas. Genetica Reprod., 1 (2): 13-4, 1977.
0756. MOSSE, G. Conservação e aplicação de sêmen de bovinos na inseminação artificial, em formas de pallets. R. Criad., 41 (491): 30-1, 1970.
0757. NEGOTTA, V.; OTEL, V. & POPOVICI, M. The effect of freezing method on the quality of bull sêmen. Lucrari Stiintifice, Institutul de Cercetari pentru Crestera Taurineto, 4: 55-63, 1977.
0758. NISHIKAWA, Y.; IRITANI, A. & OGAWA, S. Studies on the effect of liquid helium temperature - 269°C on spermatozoa of farm animals, domestic fowl and man. In: INTER. CONGR. ANIM. REPROD. AND A.I., 7., Munich, 1972. v.2, p. 1265-70.

0759. NISHIKAWA, Y.; IRITANI, A.; SHIRAYAMA, K. & TA
RAO, T. Motility and fertilizing ability
of frozen cattle sêmen stored for long
terms/4 to 13 years. In: INTER. CONGR.
ANIM. REPROD. AND A.I., 8., Cracow, 1976.
Proceedings. v.4, p. 838-41.
0760. NORMAN, C. Further studies on the preservation
of mammalian sperm at variable temperatures.
In: INTER. CONGR. ANIM. REPROD. AND A.I.,
5., Trento, 1964. Proceedings. v.4, p.
269-75.
0761. OGATA, T.; KOTO, K.; KATABIRA, I. & DURUKAWA,
H. Studies on preparation method storage
and fertility of deep frozen bull sêmen sto
red in straws in liquid nitrogen vapour .
Anim. Breed. Abstr., 37: 65, 1968.
0762. OSTASHKO, F.I.; VISHNEVSKII, V.I.; SHVETS, A.
D. & GAMULYA, G.D. Freezing bull sêmen to
the temperature of liquid hydrogen. Sel'
Skokhoz'yaistvennaya Biol., 7 (4): 630-1,
1972.

0763. OTEL, V. Results with deep-freezing of sēmen in Romania. Tierzuchter, 24 (12): 347-50, 1972.
0764. OTEL, V.; BOUREANU, A.; FEREDean, T. & NEGOLTA, E. Results of conservation of bull sēmen by freezing in the Rumanian Socialist Republic. Zeszyty Probl. Postepow Nauk. Rolniczych, 108: 181-6, 1971.
0765. OZKOCA, A. Freezing of bull sēmen in plastic straws using a BF-4-2 freezer and the results obtained. Istanbul Universitesi Veteriner Fakultesi Dergisi, 2 (1): 41-8, 1976.
0766. PACE, M.M. & SULLIVAN, J.J. A biological comparison of the 0.5 ml ampoule and the 0.5 ml French straw systems for packaging bovine spermatozoa. In: TECH. CONF. A.I. AND REPROD., 7., Madison, april 14-5, 1978. Proceedings. p. 22-32.

0767. PAKENAS, P.I.; GINKEVICHYUS, R.A. & PETRUSHIN, V.L. The effect of different types of plastic straw on freezing of spermatozoa. Zhivotnovodstvo, 2: 80-1, 1973.
0768. PAREZ, M.; VANHAECKE, Y. & TABARI, M. Congelation à 79°C des spermatozoïdes de bovins. Elevage et Insemination, 88: 3-8, 1954.
0769. PATRICK, T.E. & KELLEGREEN, H.C. The miracle of frozen sēmen. Lousiana Agric., 11 (4): 3-5, 1967.
0770. PETROV, Z.Z.; DOKOV, V.K. & GEORGIEV, G.K. Investigating the biological suficiency of bull and ram spermatozoa in the process of their storage. Comptes Rendus de l' Acad. Bulgare des Sci., 25 (6): 837-9, 1972.
0771. PHILLIPS, P.H. & SPITZER, R.R. A synthetic pabulum for the preservation of bull sēmen. J. Dairy Sci., 29: 407-14, 1946.

0772. PICKETT, B.W. Efecto de los procedimientos de descongelacion sobre la fertilidad de los espermatozoides bovinos congelados en pallestas de 0.25 ml. Gen. Reprod., 2: 28-30, 1978.
0773. PICKETT, B.W. & BERNDTSON, W.E. The preservation of bovine spermatozoa by freezing in straws. a review. J. Dairy Sci., 57: 1287-301, 1974.
0774. PICKETT, B.W.; FOWLER, A.K. & COWAN, W.A. Effects of continuous and alternating storage temperature of 79 and 196°C on motility of frozen bull semen. J. Dairy Sci., 43: 281-3, 1960.
0775. PICKETT, B.W.; HALL JUNIOR, R.C.; LUCAS, J. J. & GIBSON, E.W. Investigations on thawing frozen spermatozoa. Fertil.Steril., 16: 642-51, 1965.

0776. PICKETT, B.W.; MARTIG, R.C. & COWAN; W.A. Preservation of bovine spermatozoa at 79 and 196°C. J. Dairy Sci., 44: 2089-96, 1961.
0777. PIPER, A. Development and experience with the U.S. straw. In: CONGR. TECHN. I.A. 5., Columbia, 1974. p. 88-90.
0778. POLGE, C. Current status of the preservation of sêmen and embryos. Proc. Royal Soc. Med., 69 (8): 560-2, 1976.
0779. POLGE, C. & JAKOBSEN, K.F. Techniques for freezing bull sêmen. Vet. Rec., 71: 928-32, 1959.
0780. POLGE, C. & LOVELOCK, J.E. Preservation of bull sêmen at 79°C. Vet. Rec., 64: 396-7, 1952.
0781. POLGE, C. & PARKES, A.S. Possibilities of long term storage of spermatozoa at low temperatures. Anim. Breed. Abst., 20: 1-5, 1952.

0782. POLGE, C. & RAWSON, L.E.A. Fertilizing capacity of bull spermatozoa after freezing at 79°C. Nature, London, 169: 626-7, 1952.
0783. POLGE, C. & RAWSON, L.E.A. Long storage of bull sêmen frozen at very low temperatures 79°C. In: INTER. CONGR. PHYSIOL. ANIM. RE PROD., 11., Copenhagen, 1952. p. 90-8.
0784. POLGE, C. & RAWSON, L.E.A. Results with bull sêmen stored at 79°C. Vet. Rec., 64: 851, 1952.
0785. POLGE, C. & RAWSON, L.E.A.; STOWER, J.; HOLT, A.F.; BRUCE, W.; SWANNEY, J.M. & MOSS, J.A. The storage of bull sêmen at low temperatures. Vet. Rec., 65: 557-64, 1953.
0786. A PRESERVAÇÃO do sêmen. R. Criad., 42 (412) : 90-2, 1972.

0787. RAPATZ, G.L. What happens when sêmen is fro
zen? In: CONF. A.I. BOVINE REPROD., 1.,
Columbia, 1966. Proceedings. p. 45-6.
0788. ROBBINS, R.K.; CONNOR, M.L.; CHANDLER, P.T. &
SAACKE, R.G. Freezing of bovine sêmen in
french straws. J. Anim. Sci., 37: 327,
1973.
0789. RODRIGUEZ, O.L.; BERNDTSON, W.E.; EINNEN, B.
D. & PICKETT, B.W. Effect of rates of fre
ezing thawing and level of glycerol on the
survival of bovine spermatozoa in straws.
J. Anim. Sci., 41: 129-36, 1975.
0790. ROMENY, E.; RICHTER, L. & WEITZE, K.F. Zur
tiefgefrierung von ebersperma. Dtsch. Tie
rarztl. Wschr., 81: 501-24, 1974.
0791. ROOS, B.; BADER, H. & PFEILSTICKER, J. Pro
cessing bull sêmen by the minitube method:
laboratory and field trials. Dtsch. Tie
rarztl. Wschr., 81: 610-4, 1974.

0792. ROWSON, L.E.A. The storage of bull sēmem at low temperatures. Vet. Rec., 65: 559-60, 1958.
0793. ROWSON, L.E.A. & POLGE, C. Storage of bull sēmen at 79°C and fertility results for up to 12 months. Vet. Rec., 65: 677-9, 1953.
0794. RUGG, C.D.; BERNDTSON, W.E.; MORTIMER, R.G. & PICKETT, B.W. Effect of thawing procedures on fertility of bovine spermatozoa frozen in 0,25 ml straws. J. Anim. Sci., 44: 266-70, 1977.
0795. SALISBURY, G.W. Effect of aging at 79°C on fertility of bovine sēmen. J. Dairy Sci., 46: 637, 1963.
0796. SCHINDLER, H. Viability of bull spermatozoa after freezing and storage at 79°C. Re fuch Vet., 11: 192-5, 1954.

0797. SCHMIDT, D. & MUDRA, K. Befruchtungsvermögen pelletierten bullspermas in lenspermas in abhängigkeit von der spermienzahl je Besamungsdosis. Fortpfl. Haust., 7: 1-9, 1971.
0798. SCHRAMM, R. & LOHLE, K. Effect of low temperature and freezing techniques on motility and fertility of sēmen cells of white rock coks, with ethylene glycernf used as cryo protective agent. Monats. fur Vet., 33: 262-5, 1978.
0799. SCHULTZE, A.B.; DAVIS, H.P.; BLUNN, C.T. & OLOUFA, M. The influence of storage of bo vine sēmen on conception rate under field conditions. Res. Bull. Neb. Agric. Exp. Sta., 154: 1-18, 1948.
0800. SENGER, P.L.; BECKER, W.C. & GERBER, L.E. Effects of post-thaw temperatures on frozen sēmen. J. Anim. Sci., 41: 379, 1975.
0801. SHERMAN, J.K. Freezing and freezedrying of bull spermatozoa. Amer. J. Physiol., 190: 281-6, 1957.

0802. SHERMAN, J.K. Preservation of bull and hu
man spermatozoa by freezing in liquid ni
trogen vapour. Nature, London, 194:
1291-2, 1962.
0803. SILVA, R.G. A inseminação artificial com sê
men congelado. R. Criad., 40 (470) :
56-7, 1969.
0804. SMIRNOV, I.V. A theory about deep freezing
sêmen. In: INTER. CONGR. REPROD. ANIM.
AND I.A., 8., Cracow, 1976. (Communica
tion abstracts, 333).
0805. SMITH, A.V. & POLGE, C. Storage of bull
spermatozoa at low temperatures. Vet.
Rec., 62: 115-6, 1950.
0806. SMITH, A.V. & POLGE, C. Survival of spermato
zoa at low temperatures. Nature, London,
166: 668-9, 1950.
0807. SMITH, J.T.; MAYER, D.T. & HERMAN, H.A. Osmo
tic pressure of extended bovine sêmen du
ring storage. Res. Bull. Mo. Agric. Exp.
Sta., 538: 20, 1953.
0808. STEWART, D.L. Observation on the fertility
of frozen sêmen stored at 79°C and 196°C.
In: INTER. CONGR. ANIM. REPROD. AND A.I.,
5., Trento, 1964. Proceedings. v.4, p.
617-23.

0809. STEWART, D.L. Storage of bull spermatozoa at low temperatures. Vet. Rec., 63: 65-6, 1951.
0810. STROM, S. Influence upon fertility of bull sêmen of storage time in liquid nitrogen. In: INTER. CONGR. REPROD. ANIM. AND A.I., 6., Paris, 1968. Proceedings. v.2, p. 1171-4.
0811. SULLIVAN, J.J. & MIXNER, J.P. Effects of storage temperature and lenght of storage time upon the post-thawing motility and metabolic activity of frozen bull sêmen. J. Dairy Sci., 46: 850-3, 1963.
0812. SYMPOSIUM of freezing of gametes and spermatozoa synopsis papaers. Cryobiology, 15 (3): 350-66, 1978.
0813. UWLAND, J. Rapid freezing of bull sêmen in straws. Zuchthygiene, 13 (1):15-20, 1978.
0814. VALERANI, L. The storage of bull sêmen and the action of glucose. Zootec. Vet., 3: 825-8, 1948.
0815. VAN DEMARK, N.L. & COUTURIER, L.R. Flow dialysis as a means of preserving bovine sêmen as room temperature. J. Dairy Sci., 41: 530-6, 1958.

0816. VAN RENSBURG, S.W.J. & ROWSON, L.E.A. The fertilizing capacity of frozen bull sēmen after long distance aerial transport. Vet. Rec., 66: 385-6, 1954.
0817. VERMA, M.C.; SAXENA, V.B.; TRIPATHI, S.S. & RATAN SINGH, A. A note on deep freezing of Murrah and Jersey bull sēmen. Indian J. Anim. Sci., 45 (12): 970-1, 1977.
0818. WAGENKNECHT, L.V. Insemination of aspired sperm from an alloplastic reservoir: further results in bulls. European Urol., 3 (3): 176-8, 1977.
0819. WILLET, E.L. Studies on the preservation and the physiology of spermatozoa. Cornell, University, 1942. Tese de Mestrado.
0820. YOTT, G. & WELLS, M.E. The influence of thaw temperature on bovine spermatozoa commercially frozen in straws. Oklahoma State University, 1978. (Animal Science Report, 103).

FATORES QUE AFETAM A PRODUÇÃO DE SÊMEN

0821. ABDEL-RADUF, M. Sexual behavior and sêmen picture of bulls of SRB breed between ages of 9 and 15 months. Nord. Vet. Med., 17: 318-22, 1965.
0822. ABDOL, M.S.S. & EL-GUINDI, M.M. The effect of disodium EDTA on the fructolytic activity of bull sêmen. Zentralblatt Vet., A., 24 (7): 575-9, 1977.
0823. ACKEMANN, H.H. Comparative studies on the effects of experimental heat stress on some ejaculate characteristics, various body reactions and blood parameters of the progeny of bulls and their sires with different heat sensitivities. Hannover, 1976. Inaugural Dissertation.
0824. ALEKSIEV, A.; DANOV, D.; SEMKOV, M. & GEROGIEV, B. Effect of zinc on sêmen production in bulls. Zootekhniчески Fakultet, 22: 139-44, 1971.

0825. ALMIQUIST, J.O. Sperm survival not affected when straws thawed at very high temperature. A.I. Digest., 24: 6, 1976.
0826. ANDERSON, J. Some factors affecting the Ph change in bull sēmen. J. Agric. Sci., 37: 11-6, 1947.
0827. BAKER, F.N. The effect of frequency of ejaculation on the sēmen production, seminal characteristics and libids of bull during the first post-puberal year. J. Dairy Sci., 38: 1000-5, 1955.
0828. BANE, A. Sexual function of bulls relation to heredity, rearing intensity and somatic conditions. Acta Agric. Scand., 4: 95-108, 1954.
0829. BECKER, R.B. & WILCOX, C.J. Hereditary defects of spermatozoa : a illustrated review. A.I. Digest., 17: 8-10, 1969.

0830. BECZE, J. Effect of DDT, BHC and CCl on sē
men production in bulls and rams. Mag.
Allator. Lapja, 13: 40-4, 1958.
0831. BIELANSKI, W.; OKOLSKI, A. & LASZCZKA, A.
Effect on the level of feeding on the
number of spermatozoa collected from bul
ls and rams. In: INTER. CONGR. ANIM. RE
PROD. AND A.I., 7., Munich, 1972. p.
363.
0832. BORTOFF, A. The effect of glutathione on
the fertilizing capacity of fronzē bovi
ne spermatozoa. Anat. Rec., 125: 631-2,
1956.
0833. BRANTON, C.; BRATTON, R.W. & SALISBURY, G.
W. Sēmen production and fertility of
dairy bulls fed rations containing pro
teins of plant and animal origin. J.
Dairy Sci., 32: 292-300, 1949.

0834. BRANTON, C.; BRATTON, R.W. & SALISBURY, G.W.
Total digestible nutrients and protein le
vels for dairy bulls used in artificial
insemination. J. Dairy Sci., 30: 1003-
13, 1947.

0835. BRANTON, C.; MUSGRAVE, S.D.; DUNN, H.O. & FO
OTE, R.H. Causes and preservation of re
productive failures in dairy cattle. III.
Influence of underfeeding from birth
through 80 weeks of age on growth, sexual
development, sêmen production and fertili
ty of Holstein bulls. Ithaca, Cornell
University, Agricultural Experimental Sta
tion, 1961. (Bulletin, 964).

0836. BRANTON, C.; SALISBURY, G.W.; TANABE, T.Y.;
BRATTON, R.W. & MERCIER, E. Breeding be
havior, spermatogenesis and sêmen produc
tion of mature dairy bulls fed rations low
in carotene. s.n.t.

0837. CARDOSO, E.G. Suplementação de selênio e qualidade de sêmen de touros. Piracicaba, ESALQ, 1978. Tese de Mestrado.
0838. CASADY, R.B.; MYERS, R.M. & LEGATES, J.E. The effect of exposure to high ambient temperature on spermatogenesis in the dairy bull. J. Dairy Sci., 36: 14-23, 1953.
0839. CHOUDHURY, R.R. & SADHU, D.P. Effect of season and temperature on the sodium and potassium content of seminal plasma of Holstein, Jersey and Sahiwal bulls. J. Anim. Health, 15 (1): 9-13, 1976.
0840. CUPPS, P.T.; LABEN, R.C. & RAHLMANN, D.F. Effects of estradiol benzoate injections on the characteristics of bovine sêmen. J. Dairy Sci., 43: 1135, 1960.
0841. DION, W.M. The origin and species of yeasts in commercial preparations of bovine sêmen. Canadian J. Com. Med., 43 (1): 16-21, 1979.

0842. EL-SAWAF, S.A. & EL-WISHY, A.B. Effect of frequency of ejaculation on libido, sêmen production and seminal characters in mature native bulls. Vet. Med. J., 17 (18): 203-9, 1970.
0843. FATORES que afetam a utilização do sêmen bovino congelado para obtenção da máxima eficiência reprodutiva. R. Criad., 42 (510): 50-2, 42 (511): 44-6, 42 (512): 74-8, 42 (513): 20-9, 1972.
0844. FOOTE, R.H.; SEIDEL JUNIOR, G.E.; HAHN, J. ; BERNSTSON, W.E. & COULTER, G.H. Calidad seminal, produccion de espermatozôides y cambios testiculares en toros Holstein en crecimiento. Genet. y Reprod., 2 (3): 22-3, 1978.
0845. FRANCHIMONT, P.; CHARI, S.; HAGELSTEIN, M.T. & DURAISWANI, S. Existence of a follicle-stimulating hormone inhibiting factor inhibin in bull seminal plasma. Nature, London, 257 (5525): 402-4, 1975.

0846. GLEDHILL, B.L. Inherited causing infertility in the bull. J. Amer. Vet. Med. Assoc., 162: 979, 1973.
0847. GLOVER, T.D. & YOUNG, D.H. Temperature and production of spermatozoa. Fertil. and Steril., 14: 441-50, 1963.
0848. GRAVES, C.N. & EILER, H. Cortisol content of sēmen and the effect of exogenous cortisol on the concentration of cortisol and mine_rals (Ca, Mg, K and Na) in sēmen and blood plasma of bulls. Biol. Reprod., 21 (5): 1225-9, 1979.
0849. HAFES, E.S.E. Reproduction in farm animals. 4.ed. Philadelphia, Lea & Febiger, 1980.
0850. HAG, I. Causes of sterility in bulls in Sou_thern England. Brit. Vet. J., 105: 71, 104, 143, 200, 1948.
0851. HANCOCK, J.L. Evidence of an inherited semi_nal character associated with infertility of Friesian bulls. Vet. Rec., 61: 308-9, 1949.

0852. HOLY, L. The relation of the size of the cau
da epididymics to the production and quali
ty of the ejaculate in bulls. Acta Vet.
Brno., 40 (4): 405-13, 1971.
0853. JAZDZEWSKI, J.; STOLZMAN, M. & NAHLIK, K. The
effect of pelleted food of different com
position on the development and fertility
of young bulls. Roczniki Nauk. Zoot. Mo
nografie i Rozprawy., 12: 3-17, 1978.
0854. JAZKOWSKI, L. & SZULC, I. Transportation
stress and sêmen quality in bulls: at
tempts to prevent the decrease in sêmen
quality caused by transportation. Polskie
Archwn. Wet., 11: 451-63, 1968.
0855. JOHNSTON, J.E. & BRANTON, C. Effects of sea
sonal climatic changes on certain physiolo
gical reactions sêmen production and ferti
lity of dairy bulls. J. Dairy Sci., 36:
934-42, 1953.

0856. KIM, S. & PARK, H.K. Effect of Royal jelly on the motility of spermatozoa from Korean cat tle. Korean J. Anim. Sci., 18 (1): 11-5, 1976.
0857. KIM, S.; PARK, H.K. & CHOI, K.M. Effect of aromatics and enzymes on the percentagem mo tility of bovine spermatozoa. Korean J. Anim. Sci., 18 (1): 69-75, 1976.
0858. KODAGALI, S.B. & KERUS, U.K. Gonadal hypopla sia in Gir cattle. Indian Vet. J., 45: 114-8, 1968.
0859. KOLLER, R. The influence of internal and ex ternal temperature on sêmen production in the bull. Wien. Tierarztl. Mschr., 37: 657-63, 1950.
0860. KRAUSE, D.; REINHARD, H.J.; KOHLER, W. & TIE FENBACH, B. Effect of the anthelmintic fen bendazole on sêmen quality of A.I. bulls. Detsch. Tierztl. Wochens., 82 (6): 231-3, 1975.

0861. KRZYZANOWSKI, J. Action of zanil (oxyclozanide) on some properties of the blood and sêmen of bulls. II. Alkaline and acid phosphatase activity and fructose content of sêmen. Polskie Arch. Weter., 17 (2): 291-300, 1974.
0862. KRZYZANOWSKI, J. Action of zanil (oxyclozanide) on some properties of the blood and sêmen of bulls. III. The level of calcium, phosphorus, sodium, potassium, magnesium and chloride in seminal plasma and blood serum. Polskie Arch. Weter., 19 (1): 115-34, 1976.
0863. KRZYZANOWSKI, J. Action of zanil (oxyclozanide) on some properties of the blood and sêmen of bulls. IV. Total protein on the fractions in sêmen and blood. Polskie Arch. Weter., 17 (2): 301-6, 1974.
0864. LACHOWSKI, A. Phosphorus deficiency and sexual function and sêmen quality of bulls. Zeszyty Probl. Post. Nauk. Rolniczych, 196: 205-11, 1977.

0865. LAING, J.A. Observations on the characteristics of the sêmen in relation to fertility in the bull. J. Agric. Sci., 35: 1-24, 1945.
0866. LASLEY, J.F.; EASLEY, G.T. & BOGART, R. Some factors influencing the resistance of bull sperm to unfavorable environmental conditions. J. Anim. Sci., 1: 79, 1942.
0867. LASLEY, J.F. & MAYER, D.T. A variable physiological factor necessary for the survival of bull spermatozoa. J. Anim. Sci., 3: 129-35, 1944.
0868. MARINOV, P. Sensitivity of bovine spermatozoa to very low temperatures. Zhivotnovodstvo, 25 (10): 43-6, 1971.
0869. MC ENTÉE, K. Pathological conditions in old bulls with impaired fertility. J. Amer. Vet. Med. Assoc., 132: 328-31, 1958.

0870. MEACHAM, T.N.; CUNHA, T.J.; WARNICK, A.C. & HARGRAVE, D.D. Influence of low protein rations on growth and sêmen characteristics of young beef bulls. J. Anim. Sci., 22 (1): 115, 1963.
0871. MEGALE, F. Induction of erection and ejaculation in the bull by local massage. Cornell Vet., 58: 88-9, 1968.
0872. MEGALE, F.; GARCIA, O.S.; VALE FILHO, V.R. & ABREU, J.J. Massagem prêvia de epidídimo como adjuvante na coleta de sêmen por eletro ejaculação e massagem das ampolas. no prelo.
0873. MENENDEZ, A.; GUERRA, D.; DORA, J. & MORALES, J.R. Factors affecting ejaculate characters in Zebu bulls. Men. Assoc. Latinoamer. Prod. Anim., 13: 176, 1978.
0874. MENGE, A.C. & CHRISTIAN JUNIOR, J.J. Effects of auto and iso-immunization of bulls with sêmen and testis. Inter. J. Fertil., 16 (3): 130-8, 1971.

0875. MERCIER, E. The effect of season on spermatogenic activity and reproduction in cattle. Cornell University, 1946. Tese de Mestrado.
0876. MERCIER, E. Seasonal effects on spermatogenic activity in the bull reproduction in cattle. J. Dairy Sci., 29: 556, 1946.
0877. MERCIER, E. & SALISBURY, G.W. The effects of season on the spermatogenic activity and fertility of dairy bulls used in artificial insemination. Cornell Vet., 36: 301-11, 1946.
0878. MESZAROS, S. The influence of intensive rearing on sêmen production of young bulls. Deutsche Tierärztliche Wochenschrift, 83 (12): 542-4, 1976.
0879. MEYERHOEFFER, D.C.; WETTEMENN, R.P.; WELLS, M.E.; TURMAN, E.J. & MAHONEY, G.W.A. Influence of heat stress on sêmen quality and endocrine function in bulls. Oklahoma, USA, Agricultural Experiment Station, 1976.

0880. MIES FILHO, A. & GRAÇA, V. de P. Seasonal influences on spermatogenesis in imported bulls in Brazil. Rio de Janeiro, Instituto Zootecnico, 1950. (Instituto Zootecnico, 9).
0881. MUKHERJEE, D.P. & BHATTACHARYA, P. Seasonal variations in sēmen quality and haemoglobin and cell volume contents of the blood in bulls. Indian J. Vet. Sci., 22: 73-91, 1953.
0882. MULLER, E. & BRANDL, G. Influence of kallikrein on characteristics of sēmen in bulls of low fertility. Zuchthygiene, 12 (1): 24-8, 1977.
0883. MULLER, E.: RITTMANNSPERGER, F. & SZILAGYI, J. Investigations on heritability of and phenotypic and genetic correlations between reproductive characters in intensively reared young bulls. Wiener. Tierarztliche Monotschrift., 58 (4): 167-71, 1971.

0884. OLDS, D.; OLIVER, L. & SEATH, D.M. The effect of antibiotics on the fertility of bull sêmen and their relationship to the estrous cycle lenght of dairy cattle following arti-ficial insemination. J. Dairy Sci., 34: 966-70, 1951.
0885. OLTJEN, R.R.; BOND, J.; GERRITS, R.J. & JOHN-SON, L. Growth and reproductive performan-ce of bulls and heifers def purified and na-tural diets. V. Free aminoacids in the sêmen and blood plasma of bulls, puberty to 148 weeks of age. J. Anim. Sci., 33: 814-8, 1971.
0886. PARK, H.K.; KIM, S. & CHOI, K.M. Effect of sedatives febrifuges and nutrients on the percentage motility of bovine spermatozoa. Korean J. Anim. Sci., 18 (1): 37-41, 1976.
0887. PEEK, J.C. & WATKIUS, W.B. Gonadotrophin inhi-biting activity in seminal plasma from in-tact and vasectomized bull. J. Reprod. Fértil, 57 (2): 281-5, 1979.

0888. PHILLIPS, R.W.; KNAPP, B.; HEEMSTRA, L.C. & EATON, O.N. Seasonal variation in the sēmen of bull. Amer. J. Vet. Res., 4: 115-9, 1943.
0889. PILCH, J. Observations on the influence of sub-zero temperatures (-10 to -80°C) on bull sēmen motility after thawing. In: INTER. CONGR. REPROD. ANIM. AND A.I., 9., Span, 16-20 June, 1980. Proceedings. p. 383.
0890. PIMENTEL, C.A.; DESCHAMPS, J.C.; OLIVEIRA, J.F.A.; CARDELINO, R. & PIMENTEL, M.A. Effect of early weaning on reproductive efficiency in beef. Theriogenology, 2 (6): 421-7, 1979.
0891. PRABHU, S.S. & CUNHA, S. Effect of muscular exercise on sēmen production. Indian J. Vet. Sci., 22: 93-107, 1953.

0892. PRABHU, S.S.; GUHA, S. & BHATTACHARYA, P. Re-
placement of plant proteins by animal pro-
teins in the rations of breeding bulls and
its effect on sēmen production. Indian J.
Vet. Sci., 23: 175-84, 1953.
0893. RADHAKRISHNAN, R.; VENKATASWANI, V. & PATT-
BIRAMAN, S.R. Further report on the ef-
fect of protective vaccination on the sē-
men quality of breeding bulls. Indian Vet.
J., 52 (8): 620-5, 1975.
0894. RAPOTZ, G.L. & CANNON, C.Y. The influence of
management, breed and season upon the pH
of bulls sēmen. J. Dairy Sci., 30: 933-8,
1947.
0895. REID, J.T.; WARD, G.M. & SALISBURY, R.L. Sim-
ple versus complex concentrate mixtures
for young breeding bulls. I. Sēmen produc-
tion. J. Dairy Sci., 31: 439-47, 1948.

0896. RETIEF, G.P.; NEITZ, W.O. & MC FARLANE, J.S.
Observations on the effect of tick borne
fever on the spermatogenesis of bulls. J.
South. African Vet. Med. Assoc., 42 (4):
321-5, 1971.
0897. RICHTER, L. Occurrence of moulds and yeasts
in the food and sēmen of bulls: method of
detection and the possible importance of
moulds and yasts in reproductive disordi
ers of hitherto unknown origin. Berli
nier und Munchener Tierarztliche Wochens
chrift, 88 (12): 224-9, 1975.
0898. SAIRAN, M.R.; RANGANATHAN, M.R. & LAMOTHE,
P. Presence of follicle stimulating horu
mone and luteinizing hormone in bull semii
nal plasma. J. Endocrinol., 84 (1): 17-
23, 1980.
0899. SCHMIDT, K. Seasonal influence on sēmen prou
duction in bulls. Mh. Vet. Med., 9: 349-
53, 1954.

0900. SCHONS, J.A.B.; FERREIRA NETO, J.M. & GARCIA, O.S. Teores de fructose inicial e ácido cítrico no sêmen total de touros indianos e hilandeses com hipoplasia e degeneração testicular. Arq. UFMG., 26 (1): 63-8, 1974.
0901. SCHWARK, H.J.; LUHMANN, P. & CARL, W.D. Studies on the testes of young bulls 1: Testis development and correlation with age and body weight and some sêmen characteristics. Monatshefte fur Veterinarmedizin, 27 (5): 172-6, 1972.
0902. SHANNON, P. Factors affecting sêmen preservation and conception rates in cattle. J. Reprod. Fertil., 54 (2): 519-27, 1978.
0903. SMIRNOV, E.D. Effect of supplementing bulls with potassium iodide on physiolocharacters of sêmen. Trudy. Moldavski Nauchno Issledovatel'skii Institut Zhivotnovodstva i Veterinarii, 1972. p. 103-7.

0904. STEPHAN, E.; DYCKA, J. & LORRMANN, W. Problems of the climatic sensitivity of domestic animals. IX. Effects of experimental heat stress on bull, correlation of body, blood and sēmen values. Zuchthygiene, 7 (2): 83-7, 1972.
0905. STOYANOV, T. & ZHEKOV, G. Relationship between some characters of microclimate and sēmen production in bulls. Zhivotnov dni Nauki, 9 (6): 59-66, 1972.
0906. SWANSON, E.W. & BOATMAN, J.P. The effect of thiouracil feeding upon the seminal characteristics of dairy bulls. J. Dairy Sci., 36: 246-52, 1953.
0907. SWANSON, E.W. & BOYD, L.J. Factors affecting coiled-tail spermatozoa in the bull. Amer. J. Vet. Res., 23: 300-8, 1962.
0908. SWANSON, E.W. & HERMAN, H.A. Seasonal variation in sēmen quality of some Missouri dairy bulls. J. Dairy Sci., 27: 303-10, 1944.

0909. THOMAS, J.W. & MOSS, S. The effect of orally administered molybdenum on growth, spermatogenesis and testes histology of young dairy bulls. J. Dairy Sci., 34: 929-34, 1951.
0910. THOMSON, D.M. Some notes on the management of bulls in relation to sêmen production. Vet. Rec., 62: 480-1, 1950.
0911. VALE FILHO, V.R.; PINTO, P.A.; FONSECA, J. ; VEIGA SOARES, L.C.O. & SANTOS, A.E. Dos Comportamento sexual, índole e dificuldade de manejo, como fatores de limitação para colheita de sêmen pelos processos de vagina artificial e eletroejaculação em Bos in dicus, Bos taurus e mestiços Zebu-taurino, em testes de seleção ou em uso de rotina como doadores de sêmen em Central de Inseminação Artificial em condições de Brasil-Central. In: SIMP. NAC. REPROD. ANIM., 3., 23-8 julho, 1978. Anais.

0912. ZAREMBA, W. Ejaculate characteristics of young bulls after experimental heat stress of various degrees with special reference to spermatozoan morphology and glutamic oxalocetic transaminase (GOT) activity in the seminal plasma. Tierärztliche Hochschule, Hannover, 1975. Inaugural Dissertation.

GERAL

0913. ADLER, H.C. The comparative efficiency of the intracervical and intrauterine insemination of cattle with streptomycin treated and non-treated sēmen. Acta Vet. Scand., 1: 105-13, 1960.
0914. ALBRIGHT, J.L.; ERB, R.E. & EHLERS, M.H. Freeze-drying bovine spermatozoa. J. Dairy Sci., 41: 206-7, 1958.
0915. ALMIQUIST, J.O. The effect of certain coal tar dyes used for sēmen identification on the livability and fertility of bull spermatozoa. J. Dairy Sci., 29: 815-20, 1946.
0916. ALMIQUIST, J.O. The effect of the penicillin upon the fertility of sēmen from relatively infertile bulls. J. Dairy Sci., 32: 950-4, 1949.

0917. ALMIQUIST, J.O. & AMANN, R.P. Reproductive capacity of dairy bulls XI puberal characteristics and postpuberal changes in production of sêmen and sexual activity of Holstein bulls ejaculated frequently. J. Dairy Sci., 59: 986-91, 1976.
0918. AMANN, R.P. & ALMIQUIST, J.O. Reproductive capacity of dairy bulls. VI. Effect of unilateral vasectomy and ejaculation frequency on sperm reserves: aspects of physiology. J. Reprod. Fert., 3: 260-8, 1962.
0919. ANDERSON, J. Further investigations on artificial insemination of cattle. J. Agric. Sci., 31: 348-52, 1941.
0920. ANDERSON, J. The sêmen of animals and its use of artificial insemination. Edinburgh, Oliver and Boyd, 1945.
0921. ANTAL, J. Sêmen production in intensively reared bulls. Zivocisna Vyroba, 23 (5): 349-56, 1978.

0922. ARNOTT, W.J. Problems of artificial breeding of cattle. Aust. Vet. J., 37 (4): 140-5, 1961.
0923. AUSTIN, C.R. Observations on the penetration of the sperm into the mammalian egg. Aust. J. Sci. Res., 4: 581, 1951.
0924. AUSTIN, C.R. & BRADEN, A.W.H. Passage of the sperm and the penetration of the egg in mammals. Nature, London, 170: 919-21, 1952.
0925. BANE, A. Toxicity of rubber for bull spermatozoa. Dtsch. Tierarztl. Wschr., 57: 325-7, 1950.
0926. BARKER, C.A.V. The collection of sêmen from bulls, rams and bucks by electro - ejaculator. Canad. J. Comp. Med., 22: 3-8, 1958.
0927. BARRETO, J.F. & MIES FILHO, A. Emprego de doses individuais no transporte e inseminação em bovinos. Rio de Janeiro, Instituto de Zootecnia, 1949. (12 - Publicação, 5).

0928. BARRET, G.R. & CASIDA, L.E. Time of insemination and conception rate in artificial breeding. J. Dairy Sci., 29: 556-7, 1946.
0929. BEDFORD, J.M.; COOPER, G.W. & CALVIN, H.I. Post meiotic changes in the nucleus and membranes of mammalian spermatozoa. In: INTER. SYMP. GENETICS OF SPERM., Edinburgh, 1972. Proceedings. p. 69-89.
0930. BERNDTSON, W.E. & PICKETT, B.W. Expulsion de sêmen. Pract. Bovina, 1 (3): 17, 1980.
0931. BERTAND, S. & PROBINE, M.C. Rate of heat production by bull spermatozoa. Nature, London, 178: 933, 1956.
0932. BHERGAVA, P.M.; BISHOP, M.W. & WORK, T.S. In corporation of ^{14}C amino acids into the proteins of bull spermatozoa. Biochem. J., 73: 247-56, 1959.

0933. BINELLO, D. Motility and fertility of bull spermatozoa in oetral mucus. Gazz. Vet. Milan, 1: 6-12, 1954.
0934. BISHOP, M.W.; CAMPBELL, R.C.; HANCOCK, J.L. & WALTON, A. Sēmen characteristics and fertility in the bulls. J. Agric. Sci., 44 : 227-48, 1954.
0935. BISHOP, M.W. & SALISBURY, G.W. Effect of sperm concentration on the oxigen uptake of bull sēmen. Amer. J. Physiol., 180: 107-12, 1955.
0936. BLACKSHAW, A.W. The prevention of temperature shock of bull and ram sēmen. Aust. J. Biol. Sci., 7: 573-82, 1954.
0937. BLOM, E. Problems related to the hygienic quality of bull sēmen as it is used in A.I. Zootec. Vet., 10: 427-30, 1955.

0938. BOEHNKE, H. J.; SCHLUTER, U.; MARRE, H. & PFEILS
TICKER, J. Biological and economical as
pects of sēmen of A.I. bulls. Deutsche Tie
rarztliche Wochenschrift, 85: 160-4, 1978.
0939. BONADONNA, T. Fisiopatologia de la repro
duction y fecondacion artificial ganadera.
s.l., Salvat, 1962. 2 vols.
0940. BONADONNA, T. The fructose content of bull and
ram sēmen obtained by electro - ejaculation.
Zootec. Vet., 9: 182-7, 1954.
0941. BONADONNA, T. Nozioni di tecnica della feconda
zione artificiale degli animal domestici. 2.
ed. Milano, Istituti Editoriali Cisalpino,
1945.
0942. BONADONNA, T. Probleme biologi e tecnologici
della fecondazione artificiale. Milano, Col
lana Tecnico Scientifics L. Spallanzani ,
1953.

0943. BONADONNA, T. The shipment of sēmen as a contribution to the improvement of dairy cattle. In: INTER. DAIRY CONGR., 12, Stockl., 1949. Proceedings. p. 195-8.
0944. BONFERT, M. Quality of bull sēmen after a period of sexual inactivity. Fortpflanzung, 5: 41-3, 1955.
0945. BOYD, L.J.; SMITH, F.; WOOD, P.D.P.; CRAVEN, J. & MELROSE, D.R. Fertility of inseminations with two sperm concentrations in oestrus synchronized cattle. Anim. Prod., 17 (2): 163-8, 1973.
0946. BOZŐ, S.; DUNAY, A.; SÓOS, P. & BARANY, I. Relationship between sēmen production characters in Holstein-Friesian bulls and fertility of their daughters. Allattenyesztes, 28 (1): 5-8, 1979.

0947. BRADEN, A.W.H. & AUSTIN, C.R. The number of sperms about the eggs in mammals and its significance for normal fertilization. Aust. J. Biol. Sci., 7: 543-51, 1954.
0948. BRAGA, W. Uma demonstração prática da possibilidade do transporte do sêmen conservado. Pernambuco, Sec. Agric. Indust. e Comerc., 1942. (Boletim, 9).
0949. BRANTON, C.; D'ARENSBOURG, G. & JOHNSTON, J.E. Sêmen production fructose content of sêmen and fertility of dairy bulls as related to sexual excitement. J. Dairy Sci., 35: 801-7, 1952.
0950. BRANTON, C. & FOOTE, R.H. Sêmen production and fertility of dairy bulls ejaculated either once or twice at intervals of either jour of eight days. J. Dairy Sci., 37: 1439-43, 1954.

0951. BRATTON, R.W.; FOOTE, R.H. & WENDERSON, C.D.
Semen production and fertility of mature
dairy bulls ejaculated either once or twice
at 8-day intervals. J. Dairy Sci., 37:
1444-8, 1954.
0952. BRATTON, R.W. & JAMES, C.B. The relation
ship between certain quality test and fer
tility and the inter-relationship of the
test. J. Dairy Sci., 34: 310-6, 1951.
0953. BRIGROV, A.D. Sperm damage during thawing
and ways of obviating it. Zhivotnovods
tvo, 12: 56-9, 1977.
0954. BUTLER, C.A. Notes on fertility in Friesian
bulls. J.R. Army Vet. Cps., 18: 139-41,
1947.
0955. BYERS, J.H. The influence of testes biopsy
on semen quality. J. Dairy Sci., 36:
1161-71, 1953.

0956. CALAPRICE, A. & DELLO JORO, T. Temperature of bulls sêmen at the time of ejaculation. Acta Med. Vet., Napoli, 5: 539-45, 1960.
0957. CARDELINO, S.R.A.; PIMENTEL, C.A.; DESCHAMPS, J.C. & BENTO, C.L.R. Análise de variação em quatro características de sêmen bovino e sua utilização no planejamento de experimentos. In: ENCONTRO DE PESQUISA VETERINÁRIA, 2., Pelotas, UFPEL., 1977. Anais. p.14-5.
0958. CARROL, E.J.; BALL, L. & SCOTT, J.A. Breeding soundness in bulls: a summary of 10.940 examinations. J. Amer. Vet. Med. Assoc., 15 (142): 1105-11, 1963.
0959. CASSOU, R. Nouveaux progrès en matière d'insémination dans l'espèce bovine. C.R. Acad. Agric. France., 1966. p. 746-54.
0960. CASSOU, R. Nouvelle technique d'insémination artificielle. C.R. Soc. Biol., 144: 486-7, 1950.

0961. CHANG, M.C. Fertilizing capacity of spermatozoa deposited into the Fallopian tubes. Nature, London, 168: 697, 1951.
0962. CLARKE, R.H.; HEINETSON, R.W. & THOMPSON, B. J. Subjective scoring of frozen bovine sēmen and its relation to fertility. Aust. Vet. J., 55 (5): 251-2, 1979.
0963. COMMONWEALTH BUREAU OF ANIMAL BREEDING AND GENETICS. Annotated bibliographies: A.I. in beef cattle: 1962-72. Edinburgh, Scotland, 1978. 59 ref.
0964. COUROT, M. & TOURNEUS, J.C. Qualité du sperm et réussite de l'insemination artificielle matrise des cycles sexuels chez les bovins. In: COLLOQUE INRA/SERSIA, 12-3 jan., 1976. p. 117-25.
0965. CROMBACH, J.J.M.L. Influence of preparation before service on sēmen production and conception rate of artificial insemination bulls. Tijdschr. Diergeneesk., 83: 137-44, 1958.

0966. CROMBACH, J.J.M.L.; DE ROVER, W. E DE GROOT, B.
The influence of preparation of dairy bulls
on sperm production and fertility. In:
INTER. CONGR. ANIM. REPROD., 3., Cambridge,
1956. Proceedings. p. 80-2.
0967. CUPPS, P.T.; LABEN, R.C. & REDDON, A.R. Effects
of adrenal glucocorticoids and testosterone
on the sēmen. J. Anim. Sci., 19: 509-14 ,
1960.
0968. DAUZIER, L. Physiology of movements of sperma
tozoa in the genital tract of the ewe and
the cow. Ann. Zootech., 7: 281-306, 1958.
0969. DERIVAUX, J. Fisiopatologia de la reproduccion
e Inseminaci3n artificial de los animales do
mēsticos. s.l., Acribia, 1967.
0970. DE VUYST, A. & VERSACK, W. The sucess of inse
mination in relation of the age of the sēmen
used. Ann. Med. Vet., 93: 381-3, 1949.

0971. DIMITROPOULOS, E. Vitamin E and spermatogenesis of the bull. Delt. Hellen. Kten. Hetair, 2: 163-8, 1951.
0972. DONALDSON, L.E. Custom collection and processing of bull sēmen. Aust. Vet. J., 52 (11): 510-3, 1976.
0973. DOTT, H.M. & WALTON, A. Motility and survival of spermatozoa in mixed sēmen from different bulls. J. Agric. Sci., 50: 267-72, 1958.
0974. DUNN, H.O.; LARSON, G.L. & WILLET, E.L. Preliminary breeding results with frozen sēmen. J. Dairy Sci., 36: 578, 1953.
0975. DZIUK, P.J.; GRAHAM, E.F.; DONKER, J.D.; MARION, G.B. & PETERSEN, W.E. Some observations in collection of sēmen from bulls, goats, boars and rams by electrical stimulation. Vet. Med., 49: 455-8, 1954.

0976. DYRENDAHL, I. Occurrence of zinc in bull sêmen. Nord. Vet. Med., 6: 873-82, 1954.
0977. EILER, H. & GRAVES, C.N. Oestrogen content of sêmen and the effect exogenous oestra diol 17B on the oestrogen concentration in sêmen and blood plasma of bulls. J. Re prod. Fert. 50 (1): 17-21, 1977.
0978. ELER, J.P. Essai d'utilisation de la prosta glandine F2 chez le taureau. Toulouse, Ecole Nationale Veterinaire, 1979. Tese de Mestrado.
0979. ELLIOT, F.L. Studies on some problems rela ted to the successful artificial insemina tion of dairy cattle. Cornell University, 1944. Tese de Mestrado.
0980. EMMENS, C.W. & BLACKSHAW, A.W. The fertili ty of frozen ram and bull insemination. Aust. Vet. J., 1: 76-9, 1955.

0981. ERB, R.E. & FLERCHINGER, F.H. Influence of fertility level and treatment of sêmen on nome turn decline from 29 to 180 days following artificial service. J. Dairy Sci., 37: 938-48, 1954.
0982. ERICKSON, W.E. & GRAHAM, E.F. Factors affecting the fertility of frozen bovine spermatozoa. J. Dairy Sci., 42: 520-8, 1959.
0983. EVALUATION del sêmen. Temas Orient. Agrop. (144): 17-22, 1980.
0984. EVERETT, R.W.; BEAU, B. & FOOTE, R.H. Sources of variation of sêmen output. J. Dairy Sci., 61 (1): 90-5, 1978.
0985. FILSETH, O. Conception rates using the French straw. Anim. Breed. Abst., 38: 252, 1970.

0986. FOOTE, R.H. Sperm losses from sêmen collection to insemination. In: CONGR. INTER. REPROD. ANIM. AND A.I., 5., Trento, 1964. v. 2, p. 416-20.
0987. FOOTE, R.H. & FONSECA, V.O. Defeitos hereditários verificados no sêmen. In: SIMP. NAC. REPROD. ANIM., 2., Belo Horizonte, 12-8 set., 1976. Anais. p. 96-101.
0988. FOULKES, J.A.; STEWART, D.L. & HEBERT, C.N. Artificial insemination of cattle using varying numbers of spermatozoa. Vet. Rec., 101 (11): 205, 1977.
0989. FRAPPELL, J.P. & WILLIAMS, G. A study of heterospermic insemination in cattle. In: INTER. CONGR. ANIM. REPROD. AND A.I., 3., Cambridge, 1956. Proceedings. p. 65-7.
0990. GALLIEN, L. & ROUX, P. Insemination artificielle chez les animaux domestics. France, Preses Univers, 1948.

0991. GOFFAUX, M. Tests du pouvoir fecondant du sperm congelé de taureau. Elevage Insem., 103: 3-36, 1958.
0992. GOTZE, R. Besamung und Unfrechtbarkeit der Haussauegetiere. Hannover, 1949.
0993. GRAHAM, E.F. The use of a dye indicator for testing, training and evaluating technicians in artificial insemination. In: TECH. CONF. ARTIF. INSEM. AND REPROD. 1., Columbia, 1966. Proceedings. p. 57-60.
0994. GRAHAM, E.F. & PACE, M.M. Some biochemical changes in spermatozoa due to freezing. Cryobiology, 4: 75-84, 1967.
0995. GROVE, D. Custom-freezing of sēmen in beef cattge production in Guatemala. Deutsche Tierarztliche Wochenschrift, 82 (9): 359-64, 1975.
0996. GUSTAFSSON, B. A case of akinesia of bull sperm associated with a functional disturbance in the epididymis. Nord. Vet. Med., 17: 65-72, 1965.

0997. GUSTAFSSON, B. Luminal contents of the bovine epididymis under conditions of reduced spermatogenesis, luminal blockage and certain sperm abnormalities. Acta Vet. Scand., 7 (17), 1966.
0998. HAFEZ, E.S.E. Reproduction in farm animals. 3. ed. s.l., s.c.p., 1968.
0999. HAG, I. & MULLEN, J.E.C. Phosphomonoesterases in bull sêmen. Vet. Rec., 61: 145-50, 1949.
1000. HAHN, R.; CASSOU, R. & EIBL, K. Comparative studies of sêmen freezing techniques. Deutsche Tierärztliche Wochenschrift, 76: 346, 1969.
1001. HAHN, R.; LANG, L.; LORRMANN, W.; MERKT, H.; RUNDFELDT, H. & ZODER, H.F. Sex determination trials with bull sêmen. Deutsche Tierärztliche Wochenschrift, 82 (1): 5-10, 1975.

1002. HAMMOND, J.; ROWSON, L.E.A. & WALTON, A. The artificial insemination of cattle Cambridge, W. Heffer & Sons, 1947.
1003. HENDERSON, J.A. & SNYDER, R.G. The use of frozen sêmen in routine insemination of cattle. In: INTER. CONGR. ANIM. REPROD., 3., Cambridge, 1956. Proceedings. p. 15-8.
1004. HERMAN, H.A. The correlation between some characteristics of dairy bull sêmen and conpection rate. J. Dairy Sci., 27 (4): 297-301, 1941.
1005. HERMAN, H.A. & MADEN, F.W. The artificial insemination of dairy cattle. Columbia, Lucas Brither, 1941.
1006. HERMAN, H.A. & SWANSON, E.W. Variation in dairy bull sêmen with respect to its use in A.I. Res. Bull. Mo. Agric. Expt. Sta., 326, 1941.

1007. HEYMAN, Y. Survie des spermatozoïdes dans la jonction utéro-tubaire de la vache. Paris, Université Paris, 1973.
1008. HOAGLAND, H. & PINCUS, G. Revival of mammalian sperm after immersion in liquid nitrogen. J. Gen. Physiol., 25: 337, 1942.
1009. HOPWOOD, M.L.; FAULKNER, L.C. & GASSNER, F.X. Effects of exhaustive ejaculation on composition of bovine sêmen. J. Dairy Sci., 46: 1409-15, 1963.
1010. HULTNAS, C.A. A clinical examination of service ability and sêmen picture in young bulls of the Swedish and white breed. In: INTER. VET. CONGR. STOCKHOLM, 15., 1953. Proceedings. p. 712-7.
1011. JACQUET, J. Relation of content of spreading factors in bull sêmen to fertility. Bull. Acad. Vet. Fr., 25: 161-5, 1952.

1012. JACZEWSKI, S. & PIECHACZEK, J. Sexual behaviour of bulls and its effect on sēmen quality at A.I. centres. Medycyna Weterynaryjna, 32 (6): 342-4, 1976.
1013. JOHNSTON, J.E. & MIXNER, J.P. Development of hyaluronidase in bull sēmen. J. Anim.Sci., 7: 441-6, 1948.
1014. JOHNSTON, J.E. & MIXNER, J.P. Relationship of hyaluronidase concentration to fertility of dairy bull sēmen. J. Dairy Sci., 33: 847-50, 1950.
1015. JONDET, R. Contribution à l'amélioration de la technologie du sperm du taureau. B. Acad. Vet. Fr., 53 (4): 465-8, 1980.
1016. JONDET, R. Essai de détermination du moment optimal pour l'insēmination de la vache. B. Acad. Vet. Fr., 28: 73-5, 1955.

1017. JONDET, R. Transport des spermatozoïdes chez la vache et fertilité après insèmination artificielle avec des nombres réduits de spermatozoïdes. In: COLLOQUE INSEM. TRANSPORTE, SURVIE ET POURVOIR FÉCONDANTE DES SPERMATOZOÏDES CHEZ LES VERTÉBRÉS, Paris, 4-7 nov., 1973.
1018. KAEMMERER, K. & KRAMPITZ, G. Investigation into yellow discoloration of sêmen. For tpflanzung, 5: 54-6, 1955.
1019. KHRONOPULO, N.P. Results obtained with transported bull sêmen on molochan collective farms Iskusst. Osemen sel'Khoz. Zhivotn., 1: 108-17, 1940.
1020. KIRTON, K.T. Fertility of bull sêmen with added amylase. J. Dairy Sci., 51 (9): 1426-8, 1968.
1021. KOLLIKER, A. Etudes physiologiques sur le li quide sêminal. Z. Wissensch. Zool. 7: 201-72, 1856.

1022. KRISHNA RAO, C. Development of motility in the spermatozoa of farm animals. Indian Vet. J., 35: 97-104, 1958.
1023. LAGERLOFF, N. Thirty-years experiences with a sperm laboratory for domestic animals. Zoot. Vet. La Fec. Art., (5/6): 343-8, 1964.
1024. LAMBERT, W.V. Artificial Insemination on Livestock. United States, Depto. of Agric., 1939.
1025. LARSON, E.V. & GRAHAM, E.F. Fertility of freeze-dried bovine spermatozoa. In: INTER. CONGR. ANIM. REPROD. AND A.I., 8., Cracovia, 1976. Proceedings. v.1, p.151.
1026. LASLEY, J.F. & BOGART, R. Some factors influencing reproductive efficiency of range cattle under artificial and natural breeding conditions. Res. Bull. Missouri Agric. Exp. Sta., 376: 39-40, 1943.

1027. LETARD, E. Des possibilités d'emploi du sperm de taureau transporté de France pour l'insemination artificielle dans territoires d'Outre-Mer. Rev. Elev. Vet. Pays Trop., 52 (5): 115-30, 1951.
1028. LETARD, E.; SZUMOWSKI, P.; PAREZ, M. PAGOT, M.; DERBOL, Z.; BALLIS, J. & SOUQUET, J. Export of bull sêmen from France to Coloonial territories. Rev. Elev., 5: 115-30, 1951.
1029. LIKAR, I. & LIKAR, L. Citricol observations on the determination and content of vitamin C in the ejaculate of stallions and bulls. Fortpflanzung, 4: 137-40, 1954.
1030. LINDEMANN, C. & RIKMENSPÖEL, R. Vetracellular potentials in bull spermatozoa. J. Physiol., 219 (1): 127-38, 1971.

1031. MAC MILLAN, K.L.; GILES, K.H. & HART, N.L. Pyridine nucleosidase in bull sēmen. I. Breed and sire differences in enzyme concentration. Biol. Sci., 28 (3): 267-72, 1975.
1032. MAC PHERSON, J.W. The fertility of frozen bovine sēmen packaged under carbon dioxide. J. Amer. Vet. Med. Assoc., 133: 431-2, 1958.
1033. MAHAJAN, S.C. & MENGE, A.C. Influence of uterine environment on the fertilizing capacity of sperm in cattle. J. Anim. Sci., 25: 1083, 1966.
1034. MANEJO del sēmen congelado. Temas Orient. Agrop., (144): 77-8, 1980.
1035. MANN, T. Recent studies on fertility of male animals. Deutsche Tierärztliche Wochenschrift, 83 (12): 516-8, 1976.

1036. MARGALIN, S.; BARTLETT, J.W. & LEOPARD, O.L.
The relation of longevity to fertility of
bull sêmen. J. Dairy Sci., 26: 983-5,
1943.
1037. MARSHALL, C.E. & HAFS, H.D. Sperm output
quality after PGF 2a in bulls. J. Anim.
Sci., 43 (1): 296, 1976.
1038. MATA, E.G. Relacion entre las caracteristi
cas del sêmen y la capacidad de los repro
ductores. Bol. Fac. Agron. Univ. Buenos
Aires, 26: 1-55, 1949.
1039. MERCIER, E.; BRATTON, R.W. & SALISBURY, G.W.
Sêmen production and fertility of dairy
bulls as related to frequency of ejacula
tion. Córnell Vet., 39: 32-8, 1949.
1040. MERYMAN, H.T. & KALIG, E. Survival of sper
matozoa following drying. Nature, Lon
don 184 (7): 470-1, 1959.

1041. MIES FILHO, A. Reprodução dos animais e inseminação artificial. 4. ed. Porto Alegre, Sulina, 1978.
1042. MIES FILHO, A. Sêmen. In: _____. Reprodução dos animais e inseminação artificial. 4. ed. Porto Alegre, Sulina, 1978. p.112.
1043. MIES FILHO, A. & DIAS, T.S. Aplicação do sêmen bovino congelado no Rio Grande do Sul. In: CONF. SOVERGS, 4., 1965. Anais. p. 107-10.
1044. MIES FILHO, A. & RAMOS, A.A. Inseminação artificial em bovinos. Bol. Insem. Artif., 6: 28-34, 1954.
1045. MILJKOVIC, V.; MRVOS, G.; PERKUCIN, V.; JOVANOVIC, V.; STOJADINOVIC, V. & BACIC, M. Results of investigation on fertile capability of the bull sperm in the course of the year. In: INTER. CONGR. REPROD. ANIM. AND A.I., 9., Span 16-20 june, 1980. Proceedings. p. 287.

1046. MILIKOVIC, V.; SINDJELIC, V.; KANDJERA, L.; PERKUCIN, V.; GALFI, D.; RUDINSKI, A. & IEEKOVIC, U. Untersuchung der wirkung des chlorpromasin auf das bullensperma. In: INTER. CONGR. ANIM. REPROD. AND A.I., Trento, 1964. Proceedings. p. 365-71.
1047. MIXNER, J.P. The effect of a combination of penicillin and streptomycin in semen dilutors on the fertility of dairy bulls. J. Anim. Sci., 8: 642, 1949.
1048. MIXNER, J.P. & WIGGIN, S.H. The effects of ageing on the fertility and motility of frozen semen. In: INTER. CONGR. ANIM. REPROD. AND A.I., 5., Trento, 1964. Proceedings. p. 264-8.
1049. MOVEMENT of animal semen in international trade. Regulations of various countries concerning the importation, exportation, collection and related questions. Rome, FAO, 1966. (Animal Health Branch Monograph, 8).

1050. NEDYALKOV, K. & STOYANOVA, M. Relationship between the failure of cows to conceive and allergy (to sēmen diluent). Vet. Med. Nauki, Sof., 3: 1039-44, 1966.
1051. OLDS, D.; SEATH, D.M.; CARPENTER, M. & LUCAS, A.L. Interrelationships between site of seposition, dosage and number of spermatozoa in diluted sēmen and fertility of dairy cows inseminated artificially. J. Dairy Sci., 36: 1031-5, 1953.
1052. OMRAN, K.F. & HULKA, J.F. Infertility associated with induced local antibody secretion against sperm in the bovine uterine cervix. Inter. J. Fertil., 16 (4): 195-9, 1971.
1053. ORTAVANT, R. Nouveaux sur la fertilité bovine. Elev. Insemin., 58: 17-23, 1960.
1054. OSTASHKO, F. Deep sēmen freezing. In: INTERN. CONGR. ANIM. REPROD. AND A.I., 5., Trento, 1964. v.4, p. 139-43.

1055. PARKES, A.S. The development in Great Britain, 1949-52, of the technique of preserving bull sêmen in the frozen state. Vet. Rec., 69: 463-4, 1957.
1056. PICKETT, B.W. Factory affecting the utiliza_{ti}on of frozen bovine sêmen for maximun re_{pr}oductive efficiency. A.I. Digest., fev., 8, 1971.
1057. POLONSKI, E. L'insemination artificielle: re_{vi}ue de certains travaux polonais, russes et allemands. Lyon, 1944. Tese de Doutoramen_{to}.
1058. PROCESSAMIENTO del sêmen. Temas de Orient. Agropec., (144): 23, 1980.
1059. RICHARD, J.L.; FICHTNER, R.E. & PIER, A. C. Yeast in bovine sêmen. Cornell Vet., 66 (3): 362-8, 1976.

1060. ROLLINSON, D.H.L. & MAKINSON, J.B. Evidence of an inherited seminal character associated with infertility of Friesian bulls. Vet. Rec., 61: 373, 1949.
1061. ROOK, A. La precipito diagnosi come mezzo per l'identificazione del liquido seminale di tori diversi. Zooprofilassi, 8: 89-93, 1953.
1062. ROOSEN-RUNGE, E.C. Kinetics of spermatogenesis in mammals. Ann. NY. Acad. Sci., 55: 574-84, 1952.
1063. ROTHSCHILD, M.G. & BARNES, H. Constituents of bull seminal plasma. J. Exp. Biol., 31: 561-72, 1954.
1064. ROTTENSTEN, K. A sterility-producing agent transmitted in the semen of bulls used for artificial insemination. Copenhagen, Ejvind Christenses, 1948.

1065. SCHAFFENBURG, C.A. & MC CULLAGH, E.P. Studies in sperm hormones: demonstration of estrogenic. Endocrinology, 54: 296-303, 1954.
1066. SCHMIDT, K. & DODKE, F. Insemination with deep-frozen bull sēmen. Zuchthyg. Fortphl's torung. u. Besamung., 3: 257-64, 1959.
1067. SHUKLA, D.D. & BHATTACHARYA, P. Studies on the sēmen characteristics of Indian breeds of livestock. Indian J. Vet. Sci., 19: 161-70, 1950.
1068. SMITH, A.V. The antigenic relationship of some mammals spermatozoa. Proc. Royal Soc., 136: 472-9, 1949.
1069. SMITH, A.V. Some antigenic properties of mammalian spermatozoa. Proc. Royal Soc., 136: 46-66, 1949.

1070. SNYDER, J.W. & RALSTON, N.P. Effect of forced exercise on bull fertility. J. Dairy Sci., 38: 125-30, 1955.
1071. STAPLES, R.E. & DUNN, H.O. Motility and fertility of progesterone and estrogen treated bovine sêmen. J. Dairy Sci., 43: 787-95, 1960.
1072. STONE, E.J.; JOHNSTON, J.E. & MIXNER, J.P. Live spermatozoa relationships and fertility of dairy bull sêmen. J. Dairy Sci., 33: 442-8, 1950.
1073. SWANSON, E.W. & HERMAN, H.A. The correlation between some characteristics of dairy bull sêmen and conception rate. J. Dairy Sci., 27: 297-301, 1944.
1074. TAMPION, D. & GIBBONS, R.A. Swimming of bull sperm. Nature, London, 194: 695, 1962.

1075. TECNICA de la inseminacion artificial. Temas Orient. Agrop., (144): 78-9, 1980.
1076. THIBAUT, C.; GERARD, M. & HEYMAN, Y. Transport et survie des spermatozoïdes chez la cache. In: COLLOQUE INSEM. "TRANSPOT SUR VIE ET POUVOIR FÉCONDANT DES SPERMATOZOÏDES CHEZ LES VERTEBRÉS, 4-7 nov., 1973. v. 26, p. 343-56.
1077. THIBAUT, C. & LEVASSEUR, M.C. Conservation et survie prolongée des spermatozoïdes dans les voies génitales femelles des vertébrés. Ann. Biol. Anim. Bioch. Biophys., 13 (2): 267-84, 1973.
1078. TKACHEV, I.F.; ONUFRIEV, P.V.; DENISOV, N.I.; MELNIKOVA, T.S. & ILYUKLINA, L.A. The effect of BVK on reproductive functions of cattle. Referativnyi Zhurnal, 5 (58) : 360, 1973.

1079. TRIMBERGER, G.W. Breeding efficiency in dairy cattle from artificial insemination at various intervals before and after ovulation. Nebraska Agr. Exp. Sta. Res. Bull., 153, 1948.
1080. VALE FILHO, V.R. Aspēctos genēticos da sub fertilidade e infertilidade dos touros. In: SIMPÓSIO NAC. REPROD. ANIM., 1., Belo Horizonte, 1974. Anais. p. 20-30.
1081. VAN DEMARK, N.L. & HAYS, R.L. Sperm transport in the perfused genital tract of the cow. Amer. J. Physiol., 183: 510-2, 1955.
1082. VAN DEMARK, N.L. & MOELLER, A.N. Speed of spermatozoan transport in reproductive tract of estrous cow. Amer. J. Physiol., 165: 674-9, 1951.
1083. VANDERPLASSCHE, M. & PAREDIS, F. The viability of bull sēmen within the genital tract of cows. Tijdschr. Diergeneesk., 74: 831-8, 1949.

1084. VENDER sêmen é negócio complicado com base na produção de touros provados; importados da Holanda e EUA, uma empresa brasileira abre caminho para evitar importação continua de sêmen. Dirig. Rural, 5 (4): 18-20, 1966.
1085. WALTON, A. The initiation of motility in mammalian spermatozoa. Proc. Soc. Stud. Fertil., 8: 53-7, 1957.
1086. WATERS, R.E. Sperm recovery post-mortem from the bull. In: INTER. CONGR. ANIM. REPROD. AND A.I., 8., Cracôvia, 1976. p. 275.
1087. WATSON, P.A. The preservation of sêmen in mammals. In: FINN, C.A. Oxford reviews of reproductive biology. Oxford, Clarendon Press, 1979. p. 283-350.
1088. WEIMANN, A.I. Spermatozoa and fertility. New York, s.c.p., s.d.

1089. WILLET, E.L. & OHMS, J.I. Influence of seminal plasma and maturity of bovine spermatozoa upon their freezability. J. Dairy Sci., 41: 90-5, 1958.
1090. ZWANENBRUG, T.S. The first International Congress of the Physiology and Pathology of Reproduction and of Artificial Insemination at Milan. Tijdschr. Diergeneesk. 73: 988-1011, 1948.

1091. ABDOU, M.S.S.; EL GUINDI, M.M.; EL-MENOUFY, A. A. & ZAKI, K. Some biochemical and metabolic aspects of the sêmen of bovines (Bubalus bubalis and Bos taurus). I. Seminal fructose in consecutive ejaculates and its relation to libido and sêmen quality. Zeitschrift fur Tierzuchtung und Zuchtungs Biologie, 94 (1): 8-15, 1977.
1092. ABDOU, M.S.S.; EL GUINDI, M.M.; EL-MENOUFY, A. A. & ZAKI, K. Some biochemical and metabolic aspects of the sêmen of bovines (Bubalus bubalis and Bos taurus). II. Factors affecting fructose utilization. Zeitschrift fur Tierzuchtung und Zuchtungs Biologie, 94 (1): 16-26, 1977.
1093. ANDERSON, J. The sugar content of bull sêmen and its reduction during storage. J.Agric. Sci., 36: 260-2, 1946.

1094. BECK, S.D. Effect of insecticides on the metabolism and motility of mammalian spermatozoa. J. Econ. Ent., 46: 570-4, 1953.
1095. BLACKSHAW, A.W. & SALISBURY, G.W. Factors influencing metabolic activity of bull spermatozoa. I. Cold-Shock and its prevention. J. Dairy Sci., 40: 1099-106, 1957.
1096. BLACKSHAW, A.W.; SALISBURY, G.W. & VAN DEMARK, N.L. Factors influencing metabolic activity of bull spermatozoa. II. 37, 21 and 5°C. J. Dairy Sci., 40: 1093-8, 1957.
1097. BOSDEDT, H.; GASTAUER, R. & HAHN, R. Enzyme activities and electrolyte concentrations in blood serum and seminal plasma of bulls. Zuchthygiene, 11 (2): 83, 1976.
1098. BYRD, E.W.; GOODEAUX, L.L.; POOL, S.H. & GODKE, R.A. Effect of bovine serum albumin and CA ++ on capacitation of bovine spermatozoa. Theriogenology, 11 (1): 93, 1979.

1099. CHANDLER, J.E. The nature of serum agglutination of bovine spermatozoa: a proposed mode of action and its metabolic effects. Diss. Abst. Inter., B., 38 (3): 974-5, 1977.
1100. CHATURVEDI, S.P.; VERMA, M.C. & TRIPATHI, S. A note on metabolic studies on preservation of Jersey bull sêmen at ambient temperature. Indian J. Anim. Sci., 47 (12): 827-9, 1977.
1101. CLARKE, E.W. & ROTHSCHILD, M.G. Anaerobic heat production of bull spermatozoa. Proc. Royal Soc., B., 147: 316-31, 1957.
1102. CUELLAR CARRASCO, L. Antigenic properties of bovine and effects of the antibodies on spermatozoa. R. Patron. Biol. Anim., 9: 23-76, 1965.
1103. DALGAARD - MIKKELSEN, S.; KVORNING, S.A. & RASBECH, N.O. On hyaluronidase concentration in bull sêmen. Skand. Vet. Tidskr. 37: 661-76, 1947.

1104. DAVE, B.K. & GRAVES, C.N. Influence of testosterone propionate during storage on livability and metabolism of bovine spermatozoa. Theriogenology, 5 (2): 61-8, 1976.
1105. DE WITT, J.J.D. The metabolism of mammalian sperm. Tydschr. Diergeneesk, 72: 54-7, 1947.
1106. DIETS, R.W. & FLIPSE, R.J. Metabolism of bovine sēmen. XIV. Transport of glycine by bovine spermatozoa. J. Dairy Sci., 49: 85, 1966.
1107. DIETS, R.W. & FLIPSE, R.J. Metabolism of bovine sēmen. XVI. Pathways for arginine utilization. J. Dairy Sci., 50 (12): 1973-7, 1967.
1108. DOCTON, F.L.; FERGUSON, L.C.; LAZCAR, E. J. & ELY, F. The antigenicity of bovine spermatozoa. J. Dairy Sci., 35: 706-9, 1952.

1109. DOTT, H.M. The effects of bovine seminal plasma on the importance change frequency and glycolysis of bovine epididymal spermatozoa. J. Reprod. Fertil., 38: 47-156, 1974.
1110. DUNN, H.O.; LEOPARD, O.L.; MURPHY, J.M. & GARRETT, O.F. The effect of Amphy1 on motility and longevity of bovine spermatozoa. J. Dairy Sci., 25: 1015-21, 1942.
1111. EHLERS, M.H. & ERB, R.E. Metabolism of bull sēmen. V. Influence of dilution rate and time. Tech. Bull. Wash. Agric. Exp. Sta., 20: 1-40, 1956.
1112. ELY, R.E.; HERMAN, H.A. & WINCHESTER, C.F. Studies of dairy bull spermatozoa. Res. Bull. Mo. Agric. Exp. Sta., 24: 353, 1942.
1113. FLIPSE, R.J. Isotopic studies of sēmen metabolism. In: SYMP. REPROD. AND INFERTIL. 3., Colorado, 1958. Proceedings. p. 233.

1114. FLIPSE, R.J. Metabolism of bovine sêmen. I.
Uptake of glucose by bovine spermatozoa .
J. Dairy Sci., 37: 425-30, 1954.
1115. FLIPSE, R.J. Metabolism of bovine sêmen. XV.
Rate-limiting reactions in the Citric acid
cycle. J. Dairy Sci., 50 (3): 381-4,
1967.
1116. FLIPSE, R.J. Products of Acetate metabolism
by bovine spermatozoa. In: INTER. CONGR.
ANIM. REPROD. AND A.I., 5., Trento, 1964.
Proceedings. v.3, p. 334.
1117. FLIPSE, R.J. & ANDERSON, W.R. Metabolic fate
of Glutamic acid-C14 in bovine spermatozoa.
J. Dairy Sci., 47: 685, 1964.
1118. FLIPSE, R.J. & ANDERSON, W.R. Metabolism in
bovine sêmen. VII. Pyruvate-Alanine con
version. J. Dairy Sci., 42: 637, 1959.

1119. FLIPSE, R.J. & BENSON, A.A. Catabolism of Glycine - C14 by washed bovine spermatozoa. Exptl. Cell. Res., 13: 611, 1957.
1120. GASSNER, F.X. & HOPWOOD, M.L. Seminal amino acid and carbohydrate pattern of bulls with normal and abnormal testes. Proc. Soc. Exp. Biol., N.Y., 81: 37-43, 1952.
1121. GHOSH, D., CASIDA, L.E. & LARDY, H.A. A Study of the metabolic activity of bull sēmen and spermatozoa in relation to their fertilizing ability. J. Anim. Sci., 8: 265-70, 1949.
1122. GHOSH, D. & LARDY, H.A. The nature of a yeast-stimulating agent in mammalian spermatozoa. J. Anim. Sci., 11: 545-9, 1940.
1123. GLEW, G. The metabolism of pyruvate in bull spermatozoa in relation to fertility. In: INTER. CONGR. ANIM. REPROD. 3., Cambridge, 1956. Proceedings. p. 36-8.

1124. GOWDA, H.C.; ROYCHOUDHURY, P.N. & PAREEK, P.K.
Transaminase activity of bull effect of buffers on the extracellular enzyme release. Zentralblatt fur Veterinarmedizin, 22A (4): 341-5, 1975.
1125. HENLE, G. & ZITTLE, C.A. Effect of gramicidin on metabolism of bovine spermatozoa. Proc. Soc. Exp. Biol., N.Y., 47: 193-8, 1941.
1126. HENLE, G. & ZITTLE, C.A. Studies of metabolism of bovine epididymal spermatozoa. Amer. J. Physiol., 70: 136, 1942.
1127. HOWE, G.R. & FLIPSE, R.J. Metabolism of bovine semen. VIII. Fluorocacetate as an inhibitor of spermatozoan motility, Glycolysis and respiration. J. Dairy Sci., 42: 1325, 1959.
1128. HUHN, J. The role of hyaluronidase in the viability of spermatozoa. In: INTER. VET. CONGR. STOCKHOLM, 15., 1953. Proceedings. pte. 1, p. 717-21.

1129. HUMPHREY, G.F. & MANN, T. Studies on the meta
bolism of sêmen. V. Citric acid sêmen.
Biochem. J., 44: 97-105, 1949.
1130. IBRAHIM, M.A.R. & GAAL, J. Effects of semi
nal plasma cholinesterase on the viability
and freezing properties of bull spermatozoa.
Acta Vet. Acad. Sci. Hungarical, 27 (4) :
403-7, 1979.
1131. JEGOU, B.; GAC-JEGOU, F. Androgen-binding pro
tein in the seminal plasma of some mamma
lian species. J. Endocrinology, 77 (2):
267-8, 1978.
1132. KINAST, F. Action of the preliminary ejacula
te and the secretion of the seminal vesi
cles on metabolism of bull spermatozoa. Mu
nich, 1958. Inaugural Dissertation.
1133. KING, T.E. & MANN, T. Sorbitol metabolism in
spermatozoa. Proc. Royal Soc., B., 151 :
226-43, 1959.

1134. KNOTT, C.B. & SALISBURY, G.W. The effect of sulfanilamide upon the livability and metabolism of bovine spermatozoa. J. Dairy Sci., 29: 285-91, 1946.
1135. KOEFOED-JOHNSEN, H.H. & MANN, T. Studies on the metabolism of sēmen. IX. Effect of surface active agents with special reference to the oxidation of Succinate by spermatozoa. Biochem. J., 57: 406, 1954.
1136. LARDY, H.A.; GROSH, D. & PLAUT, E.W.E. A metabolic regulator in mammalian spermatozoa. Science, 1949.
-
1137. LARDY, H.A.; HANSEN, R.G. & PHILLIPS, P. H. The metabolism of bovine epididymal spermatozoa. Arch. Biochem., 6: 41-51, 1945.
1138. LARDY, H.A. & PHILLIPS, P.H. Studies of fat and Carbohydrate oxidation in mammalian spermatozoa. Arch. Biochem., 6: 53, 1945.

1139. MACHADO, C.R.; VALE FILHO, V.R.; PINTO, P.A.;
MACHADO, R.Z.; VIEIRA, E.C.; FONSECA, J. &
VEIGA SOARES, L.C.O. Relação entre algu
mas características bioquímicas e qualida
de do sêmen. In: REUNIÃO DA SOC. BRASIL.
PROGR. CIÊNCIA, 2., Jaboticabal, 1977.
Anais.
1140. MANN, T. Metabolism anaerobic of spermatozoa.
Nature, London, 156, 1945.
1141. MANN, T. Metabolism of sêmen. Adv. Enzymol.,
9: 329-90, 1950.
1142. MANN, T. Studies on the metabolism of sêmen.
I. General aspects; occurrence and distri
bution of cytochrome certain enzyme and
coenzymes. Biochem. J., 39: 451-8, 1945.
1143. MANN, T. Studies on the metabolism of sêmen.
III, Fructose as a normal constituent of
seminal plasma. Site of formation and func
tion of fructose in sêmen. Biochem. J.,
40: 481-91, 1946.

1144. MANN, T. & LUTWART-MANN, C. Studies on the metabolism of sêmen. IV. Aerobic and anaerobic utilization of fructose by spermatozoa and seminal vesicles. Biochem. J., 43: 266-70, 1948.
1145. MELROSE, D.R. & TERNER, C. The metabolism of pyreivate in bull spermatozoa. Biochem. J., 53: 296-305, 1953.
1146. MYANMOTO, H. & NISHIKAWA, Y. Motility and respiration of bull spermatozoa after supercooling. J. Zootech. Sci., 50 (4): 211-6, 1979.
1147. NORMAN, C. & GOLDBERG, E. Effect of light on motility, life - span and respiration of bovine spermatozoa. Science, 130: 624-5, 1959.
1148. O'DELL, W.T. & ALMIQUIST, J.O. Freezing bovine sêmen. IV. Effect of freezing on the metabolic activity of bovine spermatozoa during and after storage at 79°C. J. Dairy Sci., 41: 1792, 1958.

1149. OREL, V. The significance of hyaluronidase in sēmen. Vestn. Csl. Akad. Zemed., 24: 37-41, 1950.
1150. ORTAVANT, R. Existence d'une phase critique dans la maturation épидидymaire des spermatozôides de belier et de taureau. C.R. Soc. Biol., 147: 1552, 1953.
1151. ROMIJN, C. Egg yolk and metabolism of bull sēmen. Tijdschr. Diergeneesk., 75: 95-109, 1950.
1152. ROMIJN, C. Physiological examination of sēmen. II. The pH value of bull sēmen as a means of judging quality. Tijdschr. Diergeneesk., 73: 136-48, 1948.
1153. ROZIN, S. Studies on seminal plasma. In ter. J. Fertil., 6: 169-74, 1961.
1154. SAACKE, R.G. Things to come in sēmen physiology. In: TECHN. CONF. ON ARTIF. IN SEM. AND REPROD. 7., Columbia, 1978. p. 98-102.

1155. SALISBURY, G.W.; GRAVES, C.N.; NARABAYASHI, N. T. & CRAGLE, R.G. Observations on the as corbic metabolism of bull and goat epididymal spermatozoa. J. Reprod. Fertil., 6: 341-9, 1963.
1156. SALISBURY, G.W. & VAN DEMARK, N.L. Carbon dioxide as a reversible inhibitor of spermatozoan metabolism. Nature, London, 180: 989-90, 1957.
1157. SCHMIDT, K. & STEGER, H. Relationship between fructolysis in bull sēmen and fertility. Zu chthyg. Fortpflsorung u. Besamung., 1: 95-105, 1957.
1158. SCHULTZE, A.B. Complementary effect of acetylcholine and thyroxine on O₂ consumption of bovine sēmen. J. Dairy Sci., 32: 726, 1949.
1159. SCHULTZE, A.B. & DAVIS, H.P. Effect of thyroxine on oxygen consumption of bovine spermatozoa and sēmen. J. Dairy Sci., 31: 946-50, 1948

1160. SCHULTZE, A.B. & MAHLER, D. The effect of so-
dium arsenite on the respiration of bovine
sêmen and the relation of this respiration
of bovine sêmen and the relation of this
response to the fertilizing ability of sê-
men. J. Dairy Sci., 35: 906-9, 1952.
1161. SCOTT, T.W.; WHITE, I.G. & ANNISON, E.F. Oxi-
dation of short-chain fatty acids(C-1-C-8)
by ram, bull, dog and fowl spermatozoa.
Glucose and acetate metabolism by ram,
bull, dog and fowl spermatozoa. Biochem.
J., 83: 392-8, 404, 1962.
1162. SHETH, A.R.; DESARI, R.B.; GAGGIL, B.A.; WADA-
DEKAR, K.B.; HUKERI, V.B. & DESHPANDE, B.
R. Effect of protaction on metabolism
of bull spermatozoa. Indian J. Exp.Biol.,
15 (5): 376-7, 1977.
1163. SMIGIELSKA, J. Activity of acrosine inhibi-
tors in sêmen plasma during the freezing
of bull sêmen in liquid nitrogen. Medycy
na Weterynaryjna, 35 (8): 500-2, 1979.

1164. STRAHL, H. Correlation between spermatological findings and hyaluronidase activity in bull sēmen. Wiener Tierärztliche Monatschrift, 65 (3): 103-4, 1978.
1165. STRZEZEK, J.; SMIGIELSKA, J. & AL-TAHA, T.J. Effect of various temperatures on the release of enzymes from bull spermatozoa during freezing and thawing. Medydyzna Weterynaryjna, 35 (6): 353-7, 1979.
1166. SULLIVAN, J.J. & MIXNER, J.P. Effects of method of egg yolk addition and of glycerol equilibration time upon post-thawing motility and metabolic activity of frozen bull sēmen. J. Dairy Sci., 46: 463-7, 1963.
1167. TANIGAWA, Y. & YOSHIHARA, K. Endonuclease activity in bull sēmen, testis and accessory sex organs. Biol. Reprod., 12 (4): 464-70, 1975.

1168. TOMME, M.F. & GRUZDEV, N.V. The effect of zinc on metabolism and sēmen production of bulls. Vestnik sel'skokhozyaistvennoi Nauki, Moscou, 3: 71-6, 1978.
1169. TOSIC, J. & WALTON, A. Metabolism of bovine spermatozoa: the formation and elimination of hydrogen peroxide by spermatozoa and effects on motility and survival. Biochem. J., 47: 199, 1950.
1170. TRUEBLOOD, M.S. & HILL, H.J. Metabolic behavior of bovine spermatozoa as influenced by bacteria. J. Dairy Sci., 40: 149-53, 1957.
1171. VAN DEMARK, N.L.; SALISBURY, G.W. & BRATTON, R.W. Oxygen damage to bull spermatozoa and its prevention by catalase. J. Dairy Sci., 32: 353-60, 1949.

1172. WADADEKAR, K.B.; SHETH, A.R.; GAGGIL, B.A.; HUKERI, V.B. & DESHPANDE, B.R. A note on the significance of seminal protein hormones in sperm metabolism of bylls. Indian J. Anim. Sci., 48 (9): 682-4, 1978.
1173. WALTON, A. The effect of egg-yolk and its constituents on the respiratory activity of bull spermatozoa. Un. Inter. Sci. Biol., Ser. B., 3: 40-5, 1949.
1174. WALTON, A. Respiratory activity of the spermatozoan as an index of activity and fertilizing capacity. Atti. Ad. Naz.Vet., 4: 36-40, 1939.
1175. WEITZE, K.F. Importance of enzyme activity determination in spermatological studies. Zuchthygiene, 11 (2): 83, 1976.
1176. WEITZE, K.F. Lactate dehydrogenase activity in seminal plasma of some domestic animals in relations to pyruvate concentration. Zuchthygiene, 12 (1): 19-23, 1977.

1177. WHITE, I.G. Metabolic studies of washed and diluted ram and bull spermatozoa. Aust. J. Biol. Sci., 6: 706-15, 1973.
1178. WHITE, I.G. Metabolism of glycerol and similar compounds by bull spermatozoa. Amer. J. Physiol., 189: 307-10, 1957.
1179. WHITE, I.G.; BLACKSHAW, A.W. & EMMENS, C.W. Metabolic and motility studies relating to the low temperature storage of ram and bull spermatozoa. Aust. Vet. J., 30: 85-94, 1954.

1180. ABRAHAM, A.; PRUDOVSKY, S. & AYLON, N. Isolation of infections bovine rhinotracheitis virus from sêmen and seminal vesicles of bull in Israel. Refuah Vet., 32 (1): 7-9, 1975.
1181. ADLER, H.C. Bovine genital vibriosis : the transmission through deep frozen sêmen and its prevention by streptomycin treatment. Nord. Vet. Med., 18: 30-3, 1966.
1182. ADLER, H.C. & RASBECH, N.O. Investigations into the effect of antibiotics on fertility of bull sêmen with special reference to the employment for sêmen of Vibrio fetus transmitting bulls. In: INTER. CONGRESS PHYSIOL. ANIM., 11., Copenhagen, 1952. p. 168-74.
1183. ALBERTSEN, B.E. The bactericidal effect on pathogenic bacteria of streptomycin in sêmen diluter. In: CONG. INTER. PHYS. ANIM. REPROD. INSEM. ARTIF., Copenhagen, 1952. v.3, p. 130.

1184. ALFORD, J.A. The occurrence of bacteria resistant to penicillin streptomycin, and sulfanilamide in diluted bull sēmen. J. Dairy Sci., 36: 1067-103, 1953.
1185. ALMIQUIST, J.O.; GLANTZ, P.J. & THORP, W.T. S. The effect of streptomycin upon the livability and bacterial content of bovine sēmen. J. Dairy Sci., 31: 501-7, 1948.
1186. ALMIQUIST, J.O.; GLANTZ, P.J. & THORP, W.T. S. The influence of streptomycin upon the livability and bacterial content of bull sēmen. J. Dairy Sci., 30: 542-3, 1947.
1187. ALMIQUIST, J.O.; THORP, W.T.S. & KNOTT, C. B. The effect of pinicillin upon the livability glycolysis and bacterial content of bovine sēmen. J. Dairy Sci., 31: 11-9, 1948.
1188. BACZYNSKI, Z. & MAYEWSKA, H. Virological characteristics of bull sēmen originating from a herd infected with bovine rhinotracheitis infections pustular vulvovaginitis virus. Bull. Vet. Inst. Pulawy, 21 (3/4): 79-81, 1977.

1189. BALASHOV, N.G.; BUTAKOV, A.K. & EVCHENKO, L.V.
Normal values for microorganism in bull sēmen. Veterinariya, Moscow, 8: 83-4, 1977.
1190. BALASHOV, N.G.; RODINA, V. Immunological reactions of seminal plasma in leptospirosis of animals. In: WORLD VET. CONGRESS, 20. , Thessaloniki, 1975. v.2, p. 993-4.
1191. BALASHOV, N.G.; RODINA, V. Survival of leptopires at various storage of temperatures in diluted sēmen and in diluents. Inst. Vet. Preparatov., 14: 378-81, 1967.
1192. BELIK, V.V. Bacteriological studies on strains of Campylobacter fetus isolated breeding bulls. Sbornik Rabot Leningradskii Veterinarnyi Institut, 40: 9-15, 1975.
1193. BELIK, V.V. Characterization of strains of Vibrio fetus isolated from bull sēmen. Sbornik Rabot Leningradskii Veterinarnyi Institut, 34: 21-6, 1973.

1194. BLOM, E. & BIRCT - ANDERSEN, A. The ultras
tructure of the bull sperm. 1. The middle
piece sperm. Nord. Vet. Med., 12: 261-
79, 1960.
1195. BLOM, E. & DAM, A. Escherichia coli in bull
sēmen and their possible causal signifi
cance for the astiology of vesiculitis.
Meddr. St. Vet. Serumbab, 409: 6, 1965.
1196. BLOM, E. & DAM, A. Occurrence of Escheri
chia coli in sēmen from Danish A.I. bulls
observed during two years. Meddr. St.
Vet. Serumbab, 438: 1-7, 1966.
1197. BLOM, E. & ERNO, H. Mycoplasmas in sēmen of
Danish breeding bulls. In: NORDIC VET.
CONGR., 11., Bergen, 1970. Proceedings.
p. 254.
1198. BLOM, E. & ROMER, O. Beta-haemolytic stre
ptococci in bull sēmen. Medlemsbl. Dans
ke Dyrlaegeforen, 44: 741-8, 1961.

1199. BOECK, M.; IBRAHIM, M.M. & BOUTERS, R. Effects of an acute IPV IBR infection on the fertility of A.I. bulls. Vlaams Diergeneesk Tydschr., 37: 177-88, 1968.
1200. BORYCZKO, Z. Experiments on reducing the bacterial contamination of frozen bull sêmen. Medycyna Weterynaryjna, 34 (6): 331-3, 1978.
1201. BOTTCHE, R. & MAHLER, D. Investigations on the persistence of the bovine IBR-IPV virus in the sêmen of naturally infected bulls. Dt. Tierarztl. Wschr., 77: 421-4, 1970.
1202. BRANNY, J. & ZEMBALA, M. Some characteristics of viruses isolated from bull sêmen and their possible pathogenicity. Br. Vet. J., 127: 88-92, 1971.
1203. BRANNY, J. & ZGORNIAK - NOWOSILSKA, I. Mycoplasmas in the sêmen of bulls. II. The serological properties of mycoplasmas isolated from sêmen. Medycyna Weterynaryjna, 27 (2): 113-5, 1971.

1214. BRATKE, E. *Corynebact renale* and *C. pyogenes* in relation to artificial insemination of cattle. Berl. Munch. Tierarztl. Wschr., 65: 247-50, 1952.
1215. BROWN, V.G.; JARVIS, B.D.W. & SCHOLLUM, L.M. Microbiology of bovine sêmen and artificial breeding practices under New Zealand conditions. New Zealand J. Agric. Res., 17 (4): 431-42, 1974.
1216. BRYAN, H.S. & BOLEY, L.E. Studies on leptospirosis in domestic animals. IV. Survival of Leptospira pomona in bovine sêmen extender. Mich. St. Univ. Vet., 16: 27-9, 1955.
1217. BUSH, L.J.; LINDWICK, T.M.; FERGUSON, L.C. & ELY, F. The effect of bacteria on the fertility of bovine sêmen. J. Dairy Sci., 33: 633-8, 1950.
1218. BWANGAMOI, O. & KAMINJOLO, J.S. Isolation of infections bovine Rhinotracheitis virus in Tanzania. Trop. Anim. Health Prod., 3 (3): 156-8, 1971.

1219. CHAPMAN, M.S.; LUCAS, M.H.; HEBERT, C.N. & GODEY, R.G. Survival of infectious bovine Rhinotracheitis virus in stored bovine sêmen. Vet. Sci. Comm., 3 (2): 137-9, 1979.
1220. CHATTAWAY, F.W.; BARLOW, A.J.E. & ALDERSLEY, T. Induction of the mycelial form of Candida albicans by hydrolysates of peptides from seminal plasma. J. Gen. Microb., 96 (2): 317-22, 1976.
1221. CHU, H.P. The agglutination of spermatozoa by viruses of influenza, numps and newcas the disease. In: CONGR. INT. MICROBIOL., 6., Rome, 1953. Proceedings. p. 20-1.
1222. COELHO, N.M. Bacterial and yeast flora of the prepuce and sêmen of bulls. Arq. UFMG, 29 (3): 351-3, 1977.
1223. CORRIAS, A. & CUBETTA, P. The multiple microbiological aspects of pathological infections of sêmen. Nuovo Progr. Vet., 30 (3): 110-4, 1975.

1224. COTTRAL, G.E.; GAILIUNAS, P. & COX, B.F. Foot-and-mouth disease virus in sēmen of bulls and its transmission by artificial insemination. Arch. Ges. Virusforsch., 23: 362-77, 1968.
1225. DARCEL, C. & COULTER, G.H. IBR virus neutralizing substance in bull seminal fluid and its removal prior to attempts at virus isolation from sēmen. Can. Vet. J., 17 (12): 318-20, 1976.
1226. DARCEL, C.; YATES, W.D.G. & MITCHELL, D. A technique for the isolation of bovine herpes virus 1 from bull sēmen using microtiter plates. Proc. Amer. Assoc. Vet. Lab. Diag., 20: 209-14, 1977.
1227. DI LIELLO, L.R. & FABER, J.E. Effect of antibiotics on vibrio fetus and bovine spermatozoa. Amer. J. Vet. Res., 18: 86-92, 1957.

1228. EASTERBROOKS, H.L. Fertility and bacterial content of diluted bull sēmen treated with various concentrations of dihydrostreptomycin sulfate. Amer. J. Vet. Res., 12: 191-3, 1951.
1229. EASTERBROOKS, H.L.; HELLER, P. & PLASTRIDGE, W.N. Fertility of diluted bull sēmen containing 100 micrograms of streptomycin per milliliter. J. Dairy Sci., 33: 737-40, 1950.
1230. EDMONDSON, J.E.; TALLMAN, K.L. & HERMAN, H. A. A study of bacteria in bovine sēmen and their effect upon livability of spermatozoa. Bull. Miss. Agric. Exp. Sta., 444: 1-12, 1949.
1231. ELLIOTT, F.L.; MURPHY, D.M.; BARTLETT, D. E. & KUBISTA, R.A. The use of polymyxin sulfate with dihydrostreptomycin and penicillin for the control of Vibrio fetus in a frozen sēmen process. A.I. Digest., 10: 10-2, 1962.

1232. ERNO, H. Bovine mycoplasmas: identification of 100 strains isolated from sêmen of bulls. Acta Vet. Microbiol., 16 (2) : 321-3, 1975.
1233. FARAG, Y.A.; ELCHAHIDI, A.A. & RAKHA, A. M. Control of Trichomonas foetus infections in ejaculated bull sêmen. Egyptian J. Vet. Sci., 14 (1): 51-62, 1979.
1234. FITZGERALD, P.R.; HAMMOND, D.M. & MINER, M.L. The survival and transmission of Trichomonas foetus in diluted bovine sêmen. Amer. J. Vet. Res., 15: 36-40, 1954.
1235. FOOTE, R.H. & BRATTON, R.W. The fertility of bovine sêmen in extenders containing sulfa_nilamide, penicilin, streptomycin and polymyxin. J. Dairy Sci., 33: 544-7, 1950.
1236. FOOTE, R.H. & BRATTON, R.W. Motility of bovine spermatozoa and control of bacteria at 5 and 25°C in extenders containing sulfanilamide, penicilin, streptomycin and polymyxin. J. Dairy Sci., 33: 842-6, 1950.

1237. FOOTE, R.H. & SALISBURY, G.W. The effect of pyridium, penicillin, furacin and phenoxethol upon the livability of spermatozoa and diluted the control of bacteria in diluted bull sêmen. J. Dairy Sci., 31: 736-8, 1948.
1238. GETTY, S.M. & ELLIS, D.J. The experimental use of bull sêmen contaminated with Pseudomonas aeruginosa organism. J. Anim. Vet. Med. Assoc., 151: 1688-91, 1967.
1239. GIERLOFF, B.C.H. & JAKOBSEN, K.F. On the survival of foot and mouth disease virus in frozen bovine sêmen. Acta Vet.Scand., 2: 210-3, 1961.
1240. GIORGI, W.; FONSECA, J.; PINTO, P.A.; VALE FILHO, V.R. & VEIGA SOARES, L.C.O. Controle bacteriológico de lavados prepuciais e sêmen bovino ampolado para uso em centros de inseminação. In: SIMPÓSIO NAC. REPROD. ANIM., 11., Belo Horizonte, 1976. Anais. p. 276.

1241. GLADIGAU, V. & RUHENSTROTH-BAUER, G. The biological significance of a basic protein (BBSP) from the seminal plasma of the bull. Zeitschrift fur Naturforschung, 29C (5/6): 257-60, 1974.
1242. GOFFAUX, M.; HARLAY, T. & ALLIETTA, M. Occurrence of IBR-IPV virus in the sēmen of A. l. bulls. Tierärztliche Wochenschrift, 83 (12): 544-7, 1976.
1243. GOSSLER, R. & PAULSEN, J. Virological studies on insemination bulls in Hessen. I. Occurrence of IBR-IPV virus infections. Berliner und Munchener Tiera Ärztliche Wochenschrift, 88 (12): 221-4, 1975.
1244. GRUNNET, N.T. Possibility shat the virus of F. & M. disease might be present in the sēmen of diseased or vaccinated bulls. Maanedsskr. Dyrlæger, 61: 167-71, 1950.
1245. GUEVARA, M.P. Survival of bovine Rhinotracheitis (IBR/IPV) virus in bull sēmen frozen in pellet form and its possible dissemination during storage. Ciências Vet., Costa Rica, 1 (1): 25-30, 1979.

1246. GUNSALUS, I.C.; CAMPBELL, J.J.R.; BECK, G. H.
& SALISBURY, G.W. The bacteriology of bull
sêmen. II. The effect on bacteria upon ra
pid tests for sêmen quality. J. Dairy
Sci., 27: 357-64, 1944.
1247. GUNSALUS, I.C.; SALISBURY, G.W. & WILLET, E.
L. The bacteriology of bull sêmen. J.
Dairy Sci., 24: 911-9, 1941.
1248. HAKKESTEEGT, E. Pseudomonas aeruginosa in
the sêmen of a bull and its effects on fer
tility. Tijdschr. Diergeneesk., 74: 297-
300, 1949.
1249. HANCOCK, J.L. & KELLY, W.R. Corynebacterium
pyogenes in bull sêmen. Vet. Rec., 60:
669-70, 1948.
1250. HENNAUX, L.; DIMITROPOULOS, E. & CORDIEZ, E.
L'action de la penicilline sur la vitalité
du sperme de taureau. C.R. Soc. Biol., Pa
ris, 142: 408-10, 1948.

1251. HIRAMUNE, T.; NARITA, M.; TOMANARI, I.; MURASI, N. & YANAGAWA, R. Distribution of Coryne bacterium renale among health bulls with special reference to inhabitation of type III in the prepuce. Nat. Inst. Anim. Health Q., Japan, 15 (3): 116-21, 1975.
1252. HIRTH, R.S. & NIELSEN, S.W. Bovine salpingo-oophoritis produced with sēmen containing a mycoplasma. Pathologia Vet., 3: 616-32, 1966.
1253. HIRTH, R.S. & NIELSEN, S.W. Experimental pathology of bovine salpingitis due to mycoplasma insemination. Lab. Invest., 15: 1132-3, 1966.
1254. HIRTH, R.S. & PLASTRIDGE, W.N. Survival of a mycoplasma in frozen bovine sperm. Amer. J. Vet. Res., 28: 97-9, 1967.
1255. HOFFMANN-WOZNIAK, K. Attempts to reduce number of bacteria in the sēmen of bulls. Medycyna Weterynaryjna, 32 (10): 583-7, 1976.

1256. HOURIGAN, J.L. & KLINGSPORN, A.L. Certification of ruminants, sēmen and ova dor freedom from bluetongue virus. Aust. Vet. J. 51 (4): 211-2, 1975.
1257. JARVIS, B.D.W. Effect of bovine seminal plasma on bacterial membranes. New. Zeal. Agric. Res., 22 (1): 33-40, 1979.
1258. JOHNSTON, W.S. & DEAS, D.W. Isolation of a Paravaccinia virus from bovine sēmen. Vet. Record, 89 (16): 450, 1971.
1259. JURMANOVA, K.; CERNA, J. & JIRANEK, E. Detection of mycoplasmas in the ejaculates of bulls at insemination centres in eastern Bohemia. Vet. Medicina, 22 (2): 81-90, 1977.
1260. JURMANOVA, K. & STERBOVA, J. Correlation between impaired spermatozoa motility and mycoplasma fidings in bull sēmen. Vet. Record, 100 (8): 157-8, 1977.

1261. KAHRS, R.F.; JOHNSON, M.E. & BENDER, G.M. Studies on the detection of infections bovine Rhinotracheitis (IBR) virus in bovine sêmen. Proc. Amer. Assoc. Vet. Lab. Diagnosticians, 20: 187-208, 1977.
1262. KAHRS, R.F.; SCHULTZ, R.D. & BEAN, B.H. Epidemiologic considerations regarding the detection of infections bovine Rhinotracheitis virus in bovine sêmen. In: ANNUAL MEETING OF THE AMER. ASSOC. VET. LAB. DIAGNOSTICIANS, 19., Miamo Beach, 1977. p. 385-94.
1263. KAHRS, R.F.; SHEFFEY, B.E. & SCHULTZ, R.D. Infections bovine Rhinotracheitis (IBR) virus in bovine sêmen: current concepts. Bovine Pract., 12: 82-4, 1977.
1264. KALEV, G. & ZAGORSKI, D. Microflora of bull sêmen after freezing and storage in liquid nitrogen. In: WORLD VET. CONGRESS, 20., Thessaloniki, 1975. Proceedings. v.2, p. 963-4.

1265. KENDRICK, J.W.; HARLAN, D.V.M.; BUSHNELL, R.B.
& KRONLUND, N. Microbiologic contamination
of bovine sêmen. Theriogenology, 4 (4):
125-9, 1975.
1266. KENDRICK, J.W. & MC ENTEE, K. The effect of
artificial insemination with sêmen contami
nated with IBR-IPV virus. Cornell Vet.,
57: 3-11, 1967.
1267. KIRCHELLE, S. Differentiation of microcaceae
strain from bull sêmen. Hannover, 1975.
Inaugural Dissertation.
1268. KORUDZHUSKI, N. Microflora of bull sêmen sto
red at low temperature. Vet. Nauki, 16
(9): 33-41, 1979.
1269. KROLIŃSKI, J. Sêmen purity and the efficacy
of artificial insemination in cows. Medy
cyna Weterynaryjna, 34 (1): 47-8, 1978.

1270. LATALA-NIEDZIELSKA, M. Effect of glycerol and other agents on the occurrence of coiled-tail spermatozoa in sēmen from bulls vaccinated against foot and mounth disease. Polskie Archiwun Weterynaryne, 14 (2): 211-31, 1971.
1271. LENZ, H. Poor bactericidal effect of two combinations of antibiotics in diluted bull sēmen. Fortpflanzung, 6: 65-9, 1956.
1272. LORRMANN, W. Contamination of deep frozen sēmen pellets with bacteria and viruses. Hannover, 1967. Inaugural Dissertation.
1273. LUCAS, M.H.; DAWSON, M.; CHASEY, D. & WIBBELEY, G. Enzootic bovine Leucosis virus in sēmen. Vet. Record., 106 (6): 128, 1980.
1274. LUEDKE, A.J.; WALTON, T.E. & JONES, R.C. Detection of Bluetongue virus in bovine sēmen. In: WORLD VET. CONGRESS, 20., Thessaloniki, 1975. Proceedings. v. 3, p. 2039-42.

1275. LUKACEVIC, J.; MILAKOVIĆ, L. & KOLUMBIĆ, T.
Pseudomonas pyocyanea in bull sēmen. Vet.
Glasn., 15: 981-7, 1961.
1276. LUKACEVIC, J.; MILAKOVIĆ, L. & KOVACEVIC, M.
Bacteriological flora of bull sēmen. Vet.
Glasn., 12: 424-9, 1958.
1277. MAC PHERSON, J.W. & FISH, N.A. The survival
of pathogenic bacteria in bovine sēmen pre
served by freezing. Amer. J. Vet. Res.,
15: 548-50, 1954.
1278. MAHRLA, A. Action of antibiotics added to
bull sēmen for artificial insemination.
Zuchthyg. Fortpfl. Störung. u. Besamung,
1: 157-63, 1957.
1279. MAJEWSKA, H.; BACZYNSKI, Z.; CZAKI, M. Viro
logical characteristics of bull sēmen.
Bull. Vet. Inst. Pulawy, 21 (1/2): 29-35,
1977.

1280. MARINOV, P.; GINOV, I.; LORETOU, K. & BONNEL, H. The isolation of viruses from the sêmen of bulls and their effect on fertility in cows. Vet. Nauki, Bulgaria, 11 (7): 26-33, 1974.
1281. MARINOV, P. & ZAGORSKI, D. Microflora of the prepuce and sêmen of bulls. Vet. Med. Nauki Sof., 3: 177-84, 1966.
1282. MAZUROVĀ, J.; RYSANEK, M. & FOREJTEK, M. Effect of long-term storage by deep freezing on the level of bacterial contamination of sêmen. Vet. Med., 20 (3): 147-52, 1975.
1283. MEDREA, N.; GAMENTZY, Z. & BOERIU, C. Observations on the effect of freezing on Trichomonas fetus contaminating sêmen. Rev. Cresterea Animalelor, 25 (4): 67-70, 1975.
1284. MEREDETH, M.J. Bacterial content pf sêmen collected by artificial vagina from bulls that evert the preputial epithelium. Vet. Rec., 87: 122-4, 1970.

1285. MEYER, M.; SONNENSCHN, B.; BISPING, W. & KRAUSE, D. Pathogenic effect of metabolic products of Staphylococcus aureus, on bull sēmen. Berliner Minchen. Tier. Wochens., 93 (4): 66-74, 1980.
1286. MIKHAILOV, N.N. & ZUDILIN, V.A. Method of treating pseudomoniasis in bull using Neomycin, Chloramine and Polymyxin M sulphate. Veterinariya, Moscow, 12: 85-6, 1975.
1287. MIKHAILOV, N.N. & ZUDILIN, V.A. Pseudomoniasis in animals with special reference to contamination of bull sēmen. Veterinariya, Moscow, 6: 88-90, 1975.
1288. MORGAN, W.J. & STEWART, D.L. The effect of Streptomycin on the survival of Vibrio fetus in sēmen and other diluents stored at 5° and 79°C. J. Comp. Path., 69: 257-67, 1959.

1289. MULLER, E.; LEIPNITZ, C. & STRAUCH, D. Transmission experiments with *Serratia marcescens* in deep frozen sêmen. Berl. Munch. Tierarztl. Wschr., 81: 64-6, 1968.
1290. MUNKER, W. Corynebacteria in bull sêmen. Berl. Munch. Tierarztl. Wschr., 73: 151-3, 1960.
1291. MYERS, R.M. & ALMIQUIST, J.O. A comparison of the effects of Aureomycin, Penicillin and Streptomycin upon spermatozoa livability and control of bacteria in bovine sêmen. J. Anim. Sci., 10: 322-30, 1951.
1292. NOWAKOWSKI, W.; WIERZBOWSKI, S.; BULANDA, M.; HECZKO, P.B. & FUROWICZ, A.J. Virulence of *Pseudomonas aeruginosa* straws isolated from the sêmen of bulls. Medycyne Weterynaryjna, 36 (4): 228-9, 1980.
1293. PALII, G.K.; NEPORADA, V.P.; VOLYANSKII, L. & KOPPAN, A.I. Sensitivity of *Pseudomonas aeruginosa* to antimicrobial agents. Veterinariya, Moscow, 3: 80-2, 1975.

1294. PANFER, S. Effect of antibiotics on bacterial flora of diluted bull sēmen. Dtsch. Tierarztl. Wschr., 67: 63-6, 1950.
1295. PAREZ, M. & GUILLO, B. Action of antibiotics on bull spermatozoa, Vibrio fetus and Trechomonas foetus. Rec. Med. Vet., 134: 157-61, 1958.
1296. PARSONSON, I.M. & SNOWDON, W.A. The effect of natural and artificial breeding using bulls infected with or sēmen contaminated with infections bovine Rhinotracheitis virus. Aust. Vet. J., 51 (8): 365-9, 1975.
1297. PELEG, B.A. & IANCONESCU, M. Sperm-agglutination and spermadsorption due to Myxoviruses. Nature, London, 211: 1211-2, 1966.
1298. PETROV, Z.Z. Alkaline phosphatase as an indicator of the biological value of bull sēmen. In: WORLD VETERIN. CONG., 20., Thessaloniki, 1975. Proceedings. p. 980-2.

1299. PIASECKA-SERAFIN, M. Prophylaxis of infection of sēmen of animals. III. Some methods of preventing infection of the prepuce and sēmen of bulls. Medycyna Weterynaryjna, 30 (10): 623-6, 1974.
1300. PLASTRIDGE, W.N.; KOTHS, M.E. & WILLIAMS, L.F. Antibiotic mediums for the isolation of vibrios from bull sēmen. Amer. J. Vet. Res., 22: 867-70, 1961.
1301. POSPELOV, A.I.; ARTEM'EV, V.I. & SEFERSHAEV, M.A. Microflora of bull sēmen stored in granules or liquid nitrogen. Sbornik Rabot Leningradskii Vet. Inst., 34: 109-11, 1973.
1302. PRINCE, P.W.; ALMIQUIST, J.O. & REID, J.T. Bacteriological studies of bovine sēmen. II. The incidence of specific types of bacteria and the relation to fertility. J. Dairy Sci., 32: 849-55, 1949.

1303. PUSTIGLIONE NETO, L. Isolamento de virus afto
so de sêmen bovino. Arq. Inst. Biol., São
Paulo, 38 (1): 27-9, 1971.
1304. PUSTIGLIONE NETO, L.; SHANNON, P.; TWOMEY, A.
& CURSON, B. Antibacterial and anti-sperm
effect of seminal plasma. New Zealand Soc.
Anim. Prod., 34: 61-4, 1974.
1305. REDDY, B.J.C. Bacterial flora of prepuce and
the effect of intra preputial treatment on
the bacteriological quality of sêmen. In
dian Vet. J., 488 (7): 722-7, 1971.
1306. REDDY, E.S.P. & BHARGAVA, P.M. Seminal plas
min: an antimicrobial protein from bovine
seminal plasma which acts in E. coli by spe
cific inhibition of RNA synthesis. Nature,
London, 279 (5715): 725-8, 1979.
1307. REMPT, D. & ZWANENBURG, T.S. Pseudomonas aeru
ginosa in het sperma van drie dekstieren.
Tijdschr. Diergeneesk., 73: 224-30, 1948.

1308. RICHARDSON, A. & SMITH, P.J. Herd fertility and *Corynebacterium haemolyticum* in bovine sēmen. Vet. Rec., 83: 156-7, 1968.
1309. ROB, O. & TOMAN, J. Prevalence of fungi in the sēmen and prepuce of breeding bulls. Vet. Med. Praha, 15: 703-8, 1970.
1310. RODINA, V. Survival of pathogenic leptospirae and thawing, influence of the type of diluent and the addition of antibacterial preparations. Trudy Gosudarstvennogo Nauchno-Kontrol'nogo Instituta Veterinarnykh Preparatov, 17: 359-63, 1971.
1311. ROSLANOWSKI, K.; LOSINSKI, T. & MICHAKIEWICZ, M. Microflora of bull sēmen as a factor for assessing herd production and management. Medydyzna Weterynaryjna, 33 (1): 33-5, 1977.
1312. RUNCEANU, L.; STOENESCU, A. & PERIANU, T. Aerobic bacterial flora of frozen bull sēmen. In: Lucrari Stiintifice II. Zootehnia Medicina Veterinara Iasi Roumania; Institutul Agronomic "Ion Ionescu de la Brad", s.d.

1313. SAMBORSKI, Z.; SENZE, A.; DUBIEL, A. & FRONCZEK, T. Concentration of Antibiotics, Penicilin, Dihydrostreptomycin and Oxite tracycline in the sêmen of bulls. Polskie Arch. Weter., 14 (3): 335-51, 1971.
1314. SAXENA, V.B. & TRIPATHI, S.S. Effect of foot and mouth disease vaccination on sêmen quality and preservability in Jersey bulls. Indian Vet. J., 54 (12): 959-64, 1977.
1315. SCHEIL, K.H.; REDDY, E.S.P. & BHARGAVA, P.M. Seminal plasma is a inhibitor of Escherichia coli RNA polymerase in vitro. Nature, London, (5715): 728-31, 1979.
1316. SCHOLLUM, L.M.; JARVIS, B.D.W. & BACON, D.F. Antimicrobial activity of bovine seminal plasma. New Zealand J. Agric. Res., 20 (3): 283-90, 1977.
1317. SCHWERDTNER, H. Bacteriological flora of sêmen and prepuce of bulls in relation to fertility. Zuchthyg. Fortpflstorung. u. Besamung, 5: 329-31, 1961.

1318. SELINGER, P. & PARDUBICE, M. Evaluation of contamination in deep-frozen bull sēmen. Veterinarství, 25 (7): 303-4, 1975.
1319. SELLERS, R.F.; BURROWS, R.; MANN, J.A. & DAWE, P. Recovery of virus from bulls affected with foot and mouth disease. Vet. Rec., 83: 303, 1968.
1320. SHANNON, P.; CURSON, B. TWOMEY, A. & MOLAN, P. C. Anti-bacterial activity of seminal plasma and other tissues. Proceedings of New Zealand Soc. Anim. Prod., 35: 61-4, 1975.
1321. SHEFFLY, B.E. & KRINSKY, M. Infections bovine Rhinotracheitis virus in extended bovine sēmen. In: ANNUAL MEETING OF THE UNITED STATES ANIMAL HEALTH ASSOCIATION, 77., Ithaca, New York, 1973. p. 131-7.
1322. SINGLETON, E.F. & SIMMON, G.C. Bacteriological study of sēmen from intensively housed bulls. Qd. J. Agric. Anim. Sci., 26: 1-7, 1969.

1323. SOREL, P. Contribution a l'etude de la bactériologie du sperm frais de taureau. Bull. Acad. Vet. Fr., 34: 295-300, 1961.
1324. STALHEIM, O.H.V. Recommended procedures for the microbiologic examination of sēmen. Proc. Amer. Assoc. Vet. Lab. Diagnosticians., 21: 1-51, 1978.
1325. STECK, F.; HUGGLER, C. & KUPFERSCHMIED, H. Control of transmission of IBR-IPV-virus by frozen bovine sēmen. In: INTER. CONG. ANIM. PROD. & A.I., 8., Crakow, 1976. Proceedings. v.4, p. 649-51.
1326. SUNAIKIN, A.A. Treatment of sēmen contaminated with Trichomonas foetus. Trudy Uses Inst. Eksp. Vet., 37: 184-9, 1970.
1327. SUTRA, P. Determination of the live bacterial content of deep-frozen bull sēmen. Magyar Allatorvosok Lapja, 35 (6): 397-9, 1980.

1328. SUTRA, P. & DURKÓ, I. Production of porphyrin by *Candida guillier-mondii* strains (isolated from epididymis of bull and from frozen sēmen. Zuchthygiene, 13 (3): 127-32, 1978.
1329. TRIPATHI, S.S. & SAXENA, V.B. A note on foot and month vaccination stress on quality, quality and preservability of sēmen in Murrah bulls. Indian J. Anim. Sci., 46 (1): 44-7, 1976.
1330. TRUSCOTT, R.B. & ABREO, C.B. Antibiotics for elimination of Mycoplasmas and Ureaplasma from bovine sēmen. J. Dairy Sci., 60 (6): 954-60, 1977.
1331. TRUSCOTT, R.B. & ABREO, C.B. The use of antibiotics for the control of Mycoplasmas and Ureaplasma (T-mycoplasma) in bovine sēmen. Proc. Soc. General Microbiology, 3 (4): 160-1, 1976.
1332. TUNKL, B. & ALERAY, Z. Isolation of mycobacterium paratuberculosis from the sēmen of a bull used for artificial insemination. Vet. Glasn., 19: 845-9, 1965.

1333. ULBRICH, F. & HAASE, H. Latent infection with infections bovine Rhinotracheitis infections pustular vulvovaginitis (IBR/IPV) in bulls. III. Technique of checking sêmen pellets for virus content. Monatshefte fur Veterinarmedizin, 30 (23): 887-90, 1975.
1334. VAN TONDER, E.M. & BOLTON, T.F.W. The isolation of Actinobacillus seminis from bovine sêmen: a preliminary report. J.S. Afr. Vet. Med. Assoc., 41: 287-8, 1970.
1335. VENEV, S. Fertilizing capacity of bull sêmen contaminated with spores of Aspergillus fumigatus. Vet. Nauki, 12 (10): 53-8, 1975.
1336. WHITMORE, H.L.; GUSTAFSSON, B.; HAVARESHTI, P.; DUCHATEAU, A.B. & MATHER, E.C. Inoculation of bulls with bovine virus Diarhea virus: excretion of virus in sêmen and effects on sêmen quality. Theriogenology, 9 (2): 153-63, 1978.

1337. WIERZBOWSKI, S. & SZMYD, D. Bacterial contamination of frozen sēmen. Medydyzna Wetery naryjna, 32 (6): 339-42, 1976.
1338. WILLIAMS, W.W. & SAVAGE, A. Observation on the seminal micropathology of bulls. Cornell Vet., 15: 353-75, 1925.
1339. WINTER, A.J.; BURDA, K. & DUNN, H.O. An evaluation of cultural technics for the detection of Vibrio fetus in bovine sēmen. Cornell Vet., 55: 431-44, 1965.
1340. YILMAZ, S. The first isolation and identification of Miyagawanella bovis from the sēmen of a bull. Etlik Vet. Bakt.Enstit. Derg., 3: 53-73, 1970.

SĚMEN IN VITRO

1341. BAKER, F.N.; SCHULTZE, A.B. & DAVIS, H.P. The effect of in vitro treatments with testosterone on the oxygen consumption of ejaculated spermatozoa. J. Dairy Sci., 32: 725-6, 1949.
1342. BAKER, F.N. & VAN DEMARK, N.L. Spermatozoa velocities in vitro. Fert. Steril., 8 (2): 129-55, 1957.
1343. BERNDTSON, W.E. & PICKETT, B.W. SĚmen fresco ou congelado. Pract. Bovina, 1 (3): 22-3, 1980.
1344. BRATANOV, K.; SOMLEV, B.; DOYCHEVA, M.; TORNYOV, A. & EFREMOVA, V. Effect of Kallikrein on bull sperm motility in vitro. Int. J. Fertil., 23 (1): 73-5, 1978.
1345. CHURY, J.; MINARIK, J. & PROCHAZKA, F. The behaviour of heterogenous sĚmen in vivo and in vitro. Sborn. csĹ. Zamed. Ved. Zivoc. Vyr., 28: 113-20, 1955.

1346. CORTEEL, J.M. Effect of seminal plasma on the survival and fertility of spermatozoa preserved in vitro of bull, ram, goat, stal lion, rabbit. Reprod. Nut. Dev., 20 (4A): 111-23, 1980.
1347. DAWSON, R.M.C. Labelling of bull sêmen with phosphorus - 32 in vivo. Nature, London, 181: 1014-5, 1958.
1348. FRANK, A.H. Preliminary report on prolonging viability of spermatozoa in vitro. J. Amer. Vet. Assoc., 775 (49): 287, 1941.
1349. JONDET, R. Insemination of cows with sêmen thawed "in vivo". In: INTER. CONG. REPROD. & A.I., Cracovia, 1976. Proceedings. p. 812.
1350. JORDÃO, L.P. Preservação do sêmen em tempera tura ambiente. R. Criad., 40 (475): 100, 1969.

1351. KIRTON, K.T. & HAFS, H.D. Sperm capacitation by uterine fluid or beta-amylase in vitro. Science, 150: 618, 1965.
1352. LEE, A.J.; SALISBURY, G.W.; BOYD, L.J. & IN GALLS, W. In vitro aging of frozen bull sêmen. J. Dairy Sci., 60: 89-95, 1977.
1353. MOELLER, A.N. & VAN DEMARK, N.L. In vitro speeds of bovine spermatozoa. Fertil. & Steril., 6: 506-12, 1955.
1354. ROY, A. & BISHOP, M.W. Effect of glycine on the survival of bull spermatozoa in vitro. Nature, London, 174: 744-7, 1954.
1355. SALISBURY, G.W. Fertilizing ability and biological aspects of sperm storage in vitro. In: CONGR. INTER. REPROD. ANIM. & A.I., 6., Paris, 1968. Proceedings. v.2, p.1189-204.
1356. SALISBURY.; BIRGE, W.J. & LODGE, J.R. Decrease in nuclear feulgen positive material (DNA) upon aging in vitro storage of bovine spermatozoa. J. Biophys. Biochem., 10: 353, 1961.

1357. SZUMOWSKI, P. Variations de la température à l'intérieur de la bouteille isolante utilisée pour le transport du sperme. Rec. Med. Vet., 129: 1021-35, 1953.
1358. VAN DEMARK, N.L. & SHARMA, U.D. Preliminary fertility results from the preservation of bovine semen at room temperatures. J. Dairy Sci., 40: 438-9, 1957.
1359. WALTON, A. The survival of spermatozoa in vitro and the measurement of motility. In: INT. CONGR. PHYSIOL. PATH. ANIM. REPROD. ARTIF. INSEM., 2., Copenhagen, 1952. Proceedings. p. 204-8.

TÉCNICAS, EQUIPAMENTOS E TECNOLOGIA DO SÊMEN

1360. ABERG, B.; CRABO, B.; EKMAN, L.; LOW, M. & NYBERG, J.A. Rapid uptake of radiostrontium in sperm. Acta Physiol. Scand., 74: 381-3, 1968.
1361. AGAR, N.S.; RAWAL, J.S. & ROY, A. Electrophoretic pattern of seminal plasma and blood serum proteins of farm animals. Indian J. Dairy Sci., 18: 101-3, 1965.
1362. ALMAKHZOUNI, I.; AL-HASHIMI, H.; ISMAIL, F.; MULLER, E. & BRANDL, G. Studies on the seminal plasma on results of bovine sperm density estimations with Lange's medico-colorimeter. Wiener Tierärztliche Monatsschrift, 62 (12): 442-3, 1975.
1363. BANE, A. A study on the technique of hemocytometric determination of sperm and sperm concentration in bull semen. Cornell Vet., 42: 518-31, 1952.

1364. BANERJEE, A.K. & GANGULI, N.C. Differentiation of sēmen from Bos bubalus and Bos indicus by starch gel electrophoresis. J. Anim. Sci., 32: 1212-5, 1971.
1365. BANGHAM, A.D. & HANCOCK, J.L. A new method counting live and dead bull spermatozoa. Nature, London, 176: 656, 1955.
1366. BEKER, L.D.S. Physiology of the bull reproductive system as revealed by immunofluorescent analyses. Diss. Abstr. Int., 30B: 5205, 1970.
1367. BEKER, S. Determination of spermatozoa number by means of cell. Archiv. Exp. Vet. 32 (1): 35-8, 1978.
1368. BENSON, R.W.; SEXTON, T.J.; PICKETT, B.W.; LU CAS, J.J. & GEBAUER, M.R. Influence of processing techniques and dilution rates on survival of frozen bovine spermatozoa. Stors, The University of Connecticut, 1968. (Research Report, 28).

1369. BERG, J.W. Differential staining of spermatozoa in sections of testis. Amer.J. Clin. Path., 23: 513-5, 1953.
1370. BERNDTSON, W.E.; PICKETT, B.W. & RUGG, C. D. Procedures for field handling of bovine sēmen in plastic staws. In: CONGR. TECH. INSEM. ARTIF., 6., NAAB, Columbia, Missouri, 1976. Proceedings. p. 51-60.
1371. BHARGAVA, P.M. Incorporation of radioactive amino-acids in the proteins of bull spermatozoa. Nature, London, 179: 1120-1, 1957.
1372. BHATTACHARYA, B.C. & KEYNES, R.D. An attempt to predetermine the sex of calves by artificial insemination with spermatozoa separated by sedimentation. Nature, London, 211: 863, 1966.
1373. BHATTACHARYA, B.C.; SHOME, P.; GUNTHER, A. H. & EVANS, B.M. Successful separation of X and Y spermatozoa in human and bull sēmen. Inter. J. Fertil., 22 (1): 30-5, 1977.

1374. BISHOP, M.W. & SMILES, J. Differentiation between living and dead spermatozoa by fluorescence microscopy. Nature, London, 179: 308, 1957.
1375. BLOM, E. The protection against "cold-shock" of sēmen specimens collected in cold weather. Medlemsbl. danske Dyrlægeforen, 30: 414-8, 1947.
1376. BLOM, E. Rapid refractometric determination of total solids in bull seminal plasma and its possible diagnostic value. Nord. Vet. Med., 20: 361-8, 1968.
1377. BONADONNA, T. Colorazione "Standard" dello sperm ai fini de riconoscimento razziale. Zoot. Vet., La Fac. Art., 1: 1-4, 1948.
1378. BONADONNA, T. Diagrammatic representation of sēmen production. Zoot. Vet., 8: 218-20, 1953.

1379. BRAVO, D.C. Nuevos métodos de obtención de esperma en los animales. Madrid, Trabajos IBA, 1936.
1380. BRIÈRE, J. Contribution a l'etude des methodes de collecte du sperme chez le taureau. Alfort, 1950. Tese de Mestrado.
1381. BRONSCH, K. & LEIDL, W. Experimental studies in bulls on excretion of radioactive phosphate in sêmen. Zbl. Vet. Med., 4: 175-84, 1957.
1382. CALISTI, V. & QUACQUARINI, P. Potency of bull sêmen treated with hyaluronidase. Zootec. Vet., 7: 239-43, 1952.
1383. CANEPA, R.; MALENO MALENOTTI, P. & RASTELLI, V. Della densità dello sperma bovino in rapporto al metodo di Raccolta (vagina artificiale e metodo del massaggio per via rettale). Com. Spall. Atti. Adun. Naz. Vet. per la Fec. Art., 4: 281-5, 1939.

1385. CASAGRANDE, J.F. Diluição e congelamento de sêmen em tubos plásticos minitub. In: SIMP. NAC. REPROD. ANIM., 2., Belo Horizonte, 12-8 set., 1976. Anais. p. 242-53.
1386. CHOMINART, R. Mise en incubation à 47°C se sperme diluë ete relation avec le % de fécondation. Elév. et Insemin., (27): 1-16, 1955.
1387. COOKE, D.F.; HALLET, F.R. & BARKER, C. A.V. Motility evaluation of bull spermatozoa by photon correlation spectroscopy. J. Mechan. Cell. Motility, 3 (4): 219-23, 1976.
1388. COX, C.P. & MELROSE, D.R. The calibration of a photó-eletric absorptiometer for the rapid estimation of counts of spermatozoa in bull sêmen. J. Agric. Sci., 43: 375-9, 1953
1389. DEB, S.B. Design of an isothermic container for transport of sêmen. Sci. & Cult., 14: 388-9, 1949.

1390. DELEU, V. & NAUK, V. Improvement of technique of freezing of sēmen in straws. Molochnoe i myasnnoe Skotovodstvo, 8: 36-7, 1973.
1391. DESCONGELACION del sēmen. Temas Orient. Agropec., (144): 27-30, 1980.
1392. DUNN, H.O. & HAFS, H.D. Extenders and techniques for freezing bovine spermatozoa. J. Dairy Sci., 36, 1953.
1393. DZIUK, P.J.; GRAHAM, E.F. & PETERSEN, W.E. The technique of electro ejaculation and its use in dairy bulls. J. Dairy Sci., 37: 1035-41, 1954.
1394. EKMAN, L.; GREITZ, V.; GUSTAFSSON, B. & THORELL, C.B. On the occurrence and significance of radiocesium in bull sēmen. Acta Vet. Scand., 8: 98-110, 1967.
1395. ELLIOTT, F.L.; SHERMAN, J.K.; ELLIOTT, E.J. & SULLIVAN, J.J. A photographic method of measuring percentage of progressively motile sperm cells. s.n.t.

1396. EINNEN, B.D.; BERNSTON, W.E.; MORTIMER, R.G.
& PICKETT, B.W. Effect of processing procedures on motility of bovine spermatozoa frozen in 0,25 ml straws. J. Anim. Sci., 43: 651-6, 1976.
1397. EMMEMS, C.W. & MARTIN, I.C.A. The fertility of bull sêmen deep-frozen by two different techniques. Aust. Vet. J., 33: 63-7, 1957.
1398. FLIPSE, R.J. & ANDERSON, W.R. Isolation of metabolites from spermatozoa by two-dimensional high voltage electrophoresis and chromatography. J. Dairy Sci., 47: 685, 1964.
1399. FORGASON, J.L.; BERRY, W.T. & GOODWIN, D. E. Freezing bull sêmen in liquid nitrogen vapor without instrumentation. J. Anim. Sci., 20: 970, 1961.
1400. GARCIA, O.S. Diluição e congelação do sêmen em paillets. In: SIMP. NAC. REPROD. ANIM., 2., Belo Horizonte, 12-8 set., 1976. Anais. p. 236-41.

1401. GIBSON, L.A.S. The fertility of frozen bull sêmen obtained by massage of the ampullae. In: INTER. CONGR. REPROD. ANIM. & A.I. , 9., Span 16-20 june, 1980. Proceedings. p. 376.
1402. GILBERT, G.R. & ALMIQUIST, J.O. Effects of processing procedures on post thaw acrosomal retention and motility of bovine spermatozoa packaged in 3 ml straws at room temperature. J. Anim. Sci., 46 (1) : 225-31, 1978.
1403. GOFFAUX, M.; TOURNEUR, J.C. & BANDET, J. Pouvoir fecondant du sperme de taureau traité selon deux techniques différents. In: Elév. et Insemin., 7-16, 1969.
1404. GOROKLOV, L.N. Modern methods of freezing sêmen and the international exchange of sêmen of superior bulls. Zeszyty Proble mowe Postepow Nauk Rolniczykh, 108: 169-76, 1971.

1405. GRAHAM, E.F. New ideas in freezing sêmen. A. I. Digest, 9: 8, 1961.
1406. GRAHAM, E.F.; SCHMEHL, M.K.L. & MAKI-LAURILA, M. Some physical and chemical methods of evaluating sêmen. In: TECH. CONF. ARTIF. INSEM. & REPROD., 3., USA, 1970. Proceedings. p. 44.
1407. GRAVES, C.N. Incorporation of radiocativity from Glycine into the DNA of mature bovine spermatozoa. Fed. Proc., 22 (2) : 569, 1963.
1408. GUERREIRO, R.T.C. Contribuição para o estudo da densidade do esperma de algumas espécies domésticas. Rev. Med. Vet., Portugal, 35: 272-4, 1940.
1409. HACKETT, A.J. & MACPHERSON, J.H. Some staining procedures for spermatozoa: a review. Canadian Vet. J., 3: 55-62, 1962.

1410. HENDRIKSE, J.; DE GROOT, B. & JANSEN, P.F.J.
A theory the practical use and the estimation of deep frozen sēmen. In: INTER. CONGR. ANIM. REPROD., 3., Cambridge, 1956. Proceedings. p. 22-7.
1411. HENRIET, L. & VERSACK, W. A thermostatic cabinet for the examination of sēmen at constant temperatures. Ann. Med. Vet., 94: 220-2, 1950.
1412. HICKMAN, C.G. Spermatocrit values in facilitating the estimation of spermatozoa concentrations. J. Dairy Sci., 41: 318-9, 1958.
1413. HILL, H.J.; SCOTT, F.S.; HOMAN, N. & GASSNER, F.X. Electroejaculation in the bull. J. Amer. Vet. Med. Assoc., 128: 375-80, 1956.
1414. HLOUSEK, A. Phase-contrast microscopy of pathological forms of bull spermatozoa. Sborn. Vys. sk. Zemedelsk. les Fac., Brno. Ser., B, 4 (25): 177-86, 1956.

1415. IDRIS, O.E. Über die möglichkeiten der weiter konservierung von aufgetautem bullensperma (Pellets) in verschiedenen medien und temperaturbereichen. Hannover, 1971. Tese.
1416. IRITANI, A. & NIWA, Y.K. Capacitation de los espermatozoides de toro y fertilizacion in vitro de Oocitos foliculares maduros en cultivo. Genet. y Reprod., 2 (3): 23, 1978.
1417. ISEMBERG, H.D. Simplified method for staining spermatozoa. Amer. J. Clin. Pathol., 18: 94, 1948.
1418. JAKOBSEN, K.F. Some deep-freezing methods of bull sêmen and their influence on fertility results. In: INTER. CONGR. ANIM. REPROD., 3., Cambridge, 1956. Proceedings. p. 30-2.
1419. JONDET, R. & RABADEUX, Y. Influence d'un intervalle "degel-insemination" de 1 heure sur le pouvoir fecondant des spermatozoides de taureaux. Elev. et Insemin., 180: 3-8, 1980.

1420. JONDET, R. & RABADEUX, Y. Survival rate fertility ability of frozen bull spermatozoa following 8 and 1 minute of exposure to Glycerol. In: INTER. CONGR. ANIM. REPROD. & A. l., 7., 1972. Proceedings. v.2, p. 1371-9.
1421. JONDET, R.; RABADEUX, Y. & JONDET, M. Influence de la durée du refroidissement (entre + 30 et + 5°C) sur la réanimation et le pouvoir fécondant des spermatozoïdes congelés de taureau. Bull. Soc. Sci. Bretagne, 47: 81-4, 1972.
1422. KARRAS, W. An optical instrument for measuring density of semen. Fortpfl. Besamung Haustiere, 2: 5-7, 1952.
1423. KARRAS, W. Das spermiodensimeter, seine entwicklung und aswendung. Dtsch. Tierarztl. Wschr., 59, 1952.

1424. KIDDY, C.A.; STONE, W.H.; TYLER, W.J. & CASIDA, L.E. Immunological studies on fertility and sterility. III. Effect of isoimmunization with blood and sêmen on fertility in cattle. J. Dairy Sci., 42: 100-9, 1959.
1425. KIM, K. & LEE, K.M. Sperm motility and conception rate of bull sêmen frozen by the simple and modified deep-freezing methods. Korean J. Anim. Sci., 12 (2): 127-31, 1970.
1426. KIM, K.; LEE, K.M. & KIM, S. The effect of ultraviolet ray treatment on diluent of bull sêmen. In: INTER. CONGR. ANIM. REPROD. & A.I., 9., Span 16-20 june, 1980. Proceedings. p. 276.
1427. KNIGHT, R.P. Ejaculation by electrical stimulation in the bull. Aust. Vet. J., 31: 131-2, 1955.
1428. KOVALEV, M.G. Effects of a permanent magnetic field on the biological qualities of bovine sperm. In: INTER. CONGR. ANIM. REPROD. & A.I., 7., Munich, 1972. Proceedings. p.484.

1429. KOZLO, N.E. Sēmen dosage and sperm concentration. Zhivotnovodstvo, 8: 74-7, 1978.
1430. KRAUSE, D. Technical problems in the freezing of sēmen. In: INTER. CONGR. ANIM. REPROD. AND A.I., 7., Munich, 1972. Proceedings. p. 172-6.
1431. LEIPNITZ, G. Fertilization capacity of bull sēmen containing blood. Zuchthygiene, 15 (1): 28-9, 1980.
1432. LEUCHTENBERGER, C.; MURMANIS, I.; ITO, S. & WEIR, D.R. Interferometric dry mass and microspectrophotometric arginine determinations on bull sperm nuclei with normal and abnormal DNA content. Chromosoma, 8: 73, 1956.
1433. LINDAHL, P.E. Separation of bull spermatozoa carrying X and Y chromosomes by counter streaming centrifugation. Nature, London, 181: 784, 1958.

1434. LINDAHL, P.E. & KIHLSSTROM, J.E. Alterations in specific gravity during ripening of bull spermatozoa. J. Dairy Sci., 35: 393-402, 1952.
1435. MAC PERSON, J.W. & PENNER, P. A modified straw technique for frozen. A.I. Digest, 20 (2): 6-8, 1972.
1436. MAC PERSON, J.W. & PENNER, P. Técnica modificada del capilar o pallesta para el sêmen congelado. Inform. Directa Pecuária, 12: 16, 1976.
1437. MAC PERSON, J.W. & VESSELINOVITCH, S.D. Electrophoresis of bovine sêmen. II. Fertilizing capacity of electrophoretically treated sêmen. Canadian J. Comp. Med., 23: 7-9, 1959.
1438. MANJO del terno y nitrogenio liquido. Temas Orient. Agropec., (144): 80-1, 1980.

1439. MANTON, V.J.A. The fertility of bovine sêmen collected by electro-ejaculation. Vet. Rec., 68: 1015, 1956.
1440. MARINOV, P. & KICHEV, G. Cryobiological behaviour of bull spermatozoa kept in different media. Doklady Bolgarskoi Akademii Nauki, 30 (4): 599-602, 1977.
1441. MARTIG, R.C. & DICKEY, J.F. Freezability of bovine spermatozoa cooled rapid with liquid nitrogen. J. Dairy Sci., 46: 1176, 1963.
1442. MASCARENHAS, H. & GOMES, W.V. Contribuição ao estudo da eletro-ejaculação em bovinos: novo tipo de elêtrodo bipolar e técnica de sua aplicação. Rio de Janeiro, Instituto de Zootecnia, 1950. (IZ-Publicação, 8).
1443. MAUPOUMÉ, R. & VERAÏN, A. Effect of ultrasonic waves on motility and survival of bull spermatozoa. C.R. Soc. Biol., Paris, 156: 60-1, 1962.

1444. MIES FILHO, A. Congelação de sêmen. Bol. In sem. Artif., 5: 45-8, 1953.
1445. MIES FILHO, A. Tecnologia do sêmen: diluição, conservação e transporte. In: _____. Reprodução dos Animais e Inseminação Artificial. Porto Alegre, Sulina, c. 1978. v.2.
1446. MIES FILHO, A.; AST, O. & VALE, G. Evaluation of bull sêmen by a photo-electric method In: CONGR. BRASIL. VET., São Paulo, 1951. Anais. p. 517-30.
1447. MIES FILHO, A.; BRAZZALE, J. & DIAS, T.S. Conservação mecânica do sêmen. In: CONF. SO VERGS, 5 e 6., 1966. Anais. p. 18.
1448. MIES FILHO, A. & ROSA, A.J. Normas práticas para a congelação de sêmen no Brasil. Bol. Insem. Artif., 6: 5-24, 1954.

1449. MITCHELL, J.P.; HANSON, R.D. & FLEMING, W.N.
Utilizing differential interference con
trast microscopy for evaluating abnormal
spermatozoa. In: TECHN. CONF. ARTIF. IN
SEM. & REPROD., 7., Madison, 1978. Pro
ceedings. p. 64-8.
1450. MIZON, J.; BOULANGER, P. & OSTEUX, T. Degra
dation spontan  e des Acides Amines mar
ques par le carbone 14, cause d'erreurs
dans les exp  riences m  taboliques. Bull.
Soc. Chim. Biol., 46: 759, 1964.
1451. MONKIEWICZ, J.; JACZEWSKI, S. & DYNAROWICZ,
I. Heavy metal content of these men of
bulls from various environments. Medydy
na Weterynaryjna, 31 (11): 684-6, 1975.
1452. MORALES, J.R. & DUVERGER, O. Three differ
ent techniques for the freezing of cat
tle s  men and their conception results .
Anim. Breed. Abst., 38: 422, 1970.

1453. MORRIS, P.G.D. Examination of bull sêmen with the ordinary and phase contrast microscopes. Brit. Vet. J., 106: 85-93, 1950.
1454. MORTIMER, R.G. Frozen bovine spermatozoa: U. S. straws versus ampules. Colorado State University Fort Collins, 1976. Tese de Mes|ado.
1455. MOSSE, G. Electro-ejaculação, como método de coleta de sêmen em touros. R. Criad., 42 (494): 56, 1971.
1456. MULLER, E. & SZILAGIL, J. Eine fotografische methode zur objektiven beurteilung der bewe glichkeit von spermien in verduennten bulle nejakulaten. In: INTER. CONGR. REPROD. A NIM. & A.I., 5., Trento, 1964. Proce edings. v.4, p. 335-40.
1457. NAGASE, H. & NIWA, T. Deep freezing bull sê men in concentrated pellet form. I. Factors affecting survival of spermatozoa. In: INTER. CONGR. REPROD. ANIM. & A.I., 5., Tren to, 1964. Proceedings. v.4, p. 410-5.

1458. NAGASE, H. & NIWA, T. Deep freezing bull sêmen in concentrated pellet form. II. Protective action of sugars. In: INTER. CONGR. ANIM. REPROD. & A.I., 5., Trento, 1964. Proceedings. v.4, p. 498-502.
1459. NAGASE, H. & NIWA, T. Deep freezing bull sêmen in concentrated pellet form. III. Fertility. In: INTER. CONGR. ANIM. REPROD. & A.I., 5., Trento, 1964. Proceedings. v.4, p. 503-6.
1460. NAGORNYI, E.P. & SMIRNOV, I.V. Insemination of cows with sêmen in gelatin capsules. Iskusst. Osemen. sel'khoz Zhivotn., 1: 148-51, 1940.
1461. NEBOGATIKOV, G.V.; GRODNITSKII, V.I.; IGNATEV, E.S. & DUDAKOV, V.V. A forced-draught apparatus for thawing of sêmen. Zhivotnovodstvo, 2., 60-3, 1979.

1462. NORMAN, C.; BORTOFF, A. & DUNBAR, R.S. Reversible inhibition of motility and respiration in bovine spermatozoa. Anat. Rec., 125: 632, 1956.
1463. PAKENAS, P.I.; GINKEVICHYUS, R.A.; LENKUTIS, V. & ILGUNAS, B. New techniques for collecting freezing and using bull sēmen. Zhivotnovodstvo, 3: 63-4, 1979.
1464. PAULSEN, L. & VARNEK, J. Rapid staining of spermatozoa. Scand. J. Clin. Lab. Invest. 5: 295, 1953.
1465. PFEILSTICKER, J. Experiences with a mobile phantom used collecting bovine sēmen. Deutsche Tierärztliche Wochenschrift, 82, 1975.
1466. PICKETT, B.W.; BERNDTSON, W.E. & SULLIVAN, J.J. Technique for processing and packaging bovine sēmen. In: CONGR. TECHN. IN SEM. ARTIF., 6., Columbia, 1976. Proceedings. p. 34-50.

1467. PICKETT, B.W. & MERILAN, C.P. Localization of Glycerol-1-C-14 in bovine spermatozoa by an autoradiographic technique. Res. Bull. Mo. Agric. Exp. Sta., 644: 1-28, 1957.
1468. PILCH, J. & STRUPCZEWSKA, M. Lyophilization as a method for preserving the sêmen of animals. Medycyna Weterynaryjna, 32 (10): 600-2, 1977.
1469. PILZ, A. The behaviour of mammalian spermatozoa in the electric field. Z. Tierz. Zucht. Biol., 60: 315-30, 1952.
1470. PINTO, P.A. Diluição e congelação de sêmen pelo método em ampolas. In: SIMP. NAC. REPROD. ANIM., 2., Belo Horizonte 12-8 set. 1976. Anais. p. 231-5.
1471. POLGE, C.; SMITH, A.V. & PARKES, A.S. Revival of spermatozoa after vitrification and dehydration at low temperatures. Nature, London, 164: 666, 1949.

1472. PRINCE, P.W. & ALMIQUIST, J.O. The effect of agitation upon the livability of bovine spermatozoa. J. Dairy Sci., 31: 839-44, 1948.
1473. RAJAMANNAN, A.H.J. El capilar o pallestra , un mêtodo para evasar sêmen. Inf. Directa Pec., 12: 5-12, 1976.
1474. RAJAMANNAN, A.H.J. A method of packaging sêmen the straw. In: CONGR. TECH. INSEM. ARTIF., 3., Columbia, 1970. Proceedings. p. 49-51.
1475. RATTAN, P.J.S.; RAO, M.B. & ANANTAKRISHNAN, C.P. Electrophoretic studies on bovine sêmen. Indian J. Anim. Sci., 42 (2): 1972.
1476. REVELL, S.G. & WOOD, P.D.P. A photographic method for the measurement of motility of bull spermatozoa. J. Reprod. Fertil., 54: 123-6, 1978.

1477. ROLLINSON, D.H.L. The use of electroejaculation in the development of artificial in semination in African cattle. In: INTER. CONGR. ANIM. REPROD. & A.I., 3., Cambridge, 1956. Proceedings. p. 44-7.
1478. ROTHSCHILD, M.G. Electrical measurement of bull sperm activity. I. The effect of small electric currents on fertilizing capacity. J. Agric. Sci., 39: 294-5, 1949.
1479. ROTHSCHILD, M.G. Electrical measurement of bull sperm activity. II. Comparison with visual assessment. J. Agric. Sci., 40: 82-3, 1950.
1480. ROWSON, L.E.A. Electrical ejaculation in the bull. Vet. Rec., 66: 326-7, 1954.
1481. SAACKE, R.G. & ALMIQUIST, J. O. Freeze-drying of bovine spermatozoa. Nature, London, 192: 995-6, 1961.

1482. SALISBURY, G.W. Fertility of bull sēmen diluted at 1:100. J. Dairy Sci., 29: 695, 1946.
1483. SALISBURY, G.W. Recent research development in the preservation and handling of bovine sēmen. Cornell Vet., 31: 149-59, 1941.
1484. SCHAFFER, C.S. & ANDREWS, F.N. The determination of the concentration of spermatozoa in fowl and bull sēmen. Anat. Rec., 86, 1943.
1485. SCHLLE, D.J. Spermathem: an electronically operated device for thawing sēmen. Praktische Tierarzt., 58 (7): 496-8, 1977.
1486. SEIDEL JUNIOR, G.E. Influence of sēmen collection techniques on composition of bull seminal plasma. J. Dairy Sci., 52: 1080-4, 1969.

1487. SMITH, J.T. & MAYER, D.T. Evaluation of sperm concentration by the hemacytometer method comparison of four counting fluids. Fert. & Steril., 6: 271-5, 1955.
1488. SMITHWICK, E.B. & YOUNG, L.G. Isolation of plasmalemmae-free mitochondria-free bull sperm flagella. Biol. Reprod., 17 (3): 443-52, 1977.
1489. SWANSON, E.W. & HERMAN, H.A. A satisfactory method of shipping dairy bull sêmen long distances. J. Dairy Sci., 27: 143-6, 1944.
1490. TACKEN, P.H.W. Determination of the density of bull sêmen by means of an electric colorimeter. Tifdschr. Diergeneesck, 77: 527-32, 1952.
1491. TÉCNICAS para recolección del sêmen del toro. Temas Orient. Agrop., (144): 9-10, 1980.

1492. TESAR, A. & STEHLIK, I. Determination of spermatozoa concentration in bull ejaculates by using a haemocytometer, photocolormeter and electronic cell counter. Veterinarni. Med., 22 (11): 665-71, 1977.
1493. TURBIN, V.F. Current methods of freezing bull semen. Anim. Breed. Abstr., 36: 432, 1968.
1494. ULLNER, W. Specific gravity, opacity and protein content of bovine semen. Tierarztl. Umsch., 8: 196-7, 1953.
1495. VALE FILHO, V.R. Exame do ejaculado visando melhor índice de congelabilidade. In: SIMP. NAC. REPROD. ANIM., 2., 1976. Anais. p.219.
1496. VAN DAM, G.C. Two photometric methods for measurement of bull sperm motility. Tydschr. Diergeneesk., 83: 1243-57, 1958.

1497. VAN DELLEN, G.A. & ELLIOTT, F.I. Procedure for time-exposure darkfield photomicrography to measure percentage progressively motile spermatozoa. In: TECHN. CONF. ARTIF. INSEM. REPROD., 7., Columbia, apr. 1978. Proceedings. p. 53-4.
1498. VAN DEMARK, N.L. & KUHLMAN, D.E. Use of fluorescent dyes for observing bovine spermatozoa in opaque media. J. Dairy Sci., 42: 1314-9, 1959.
1499. VAN RENSBURG, S.J. & VOS, W.H. A convenient type of electro-ejaculator for bulls and rams. J.S. Afr. Vet. Med. Ass., 28: 1-3, 1957.
1500. VASELINOVIC, S. Microelectrophoresis of bovine spermatozoa. Cornell Vet., 49: 359-73, 1959.
1501. WEITZE, K.F. Review of freezing damage and freezing of living material with special reference to mammalian spermatozoa. Deutsche Tierärztliche Wochenschrift, 84 (10/12): 402-6, 441-6, 481-4, 1977.

1502. WEISS, K. Staining of bovine spermatozoa. Fortpfl. Bes. Haustiere, 3: 45-7, 1953.
1503. WELLS, M.E.; PHILPOT, W.N.; MUSGRAVE, S. D.; JONES, E.W. & BROCK, W.E. Effect of method of sêmen collection and tranquilization on sêmen quality and bull behaviour. J. Dairy Sci., 49: 500-3, 1966.
1504. WHITE, I.G. The effect of washing on the motility and metabolism of ram, bull and rabbit spermatozoa. J. Exp. Biol., 30: 200-13, 1953.
1505. WILLIAMS, W.W. Technique of collecting sêmen for laboratory examination with a review of several disease bulls. Cornell Vet., 10: 87-94, 1920.
1506. YANG, C.H. & SRIVASTAVA, P.N. Purification and properties of hyaluronidase from bull sperm. J. Biol. Chem., 250: 70-83, 1975.

1507. ZVEREVA, A.P. The effect of adaptation and equilibration on the biological properties of frozen bull sēmen. Referativnyi Zhurnal, 8 (58): 440, 1978.

INDICE DE AUTORES

A

- AALBERS, J.G. 0118
- AAMDAL, J. 0676
- ABBISS, T. P. 0401
- ABBITT, B. 0447
- ABDEL-RAOUF, N. 0119, 0821
- ABDOU, M.S.S. 0345, 0346, 0380, 0822, 1091, 1092
- ABERG, B. 1360
- ABRAHAM, A. 1180
- ABREO, C.B. 0448, 1330, 1331
- ABREU, J.J. 0301, 0872
- ACKEMANN, H.H. 0823
- ACOTT, T.S. 0347
- ADKINSON, R.W. 0699
- ADLER, H. C. 0121, 0122, 0449, 0677, 0678, 0679, 0913,
1181, 1182
- ADUAGA, J. 0659
- AGAR; N.S. 1361
- AGUILAR, R.R. 0348
- ALAMY, M.A. 0349
- ALBRIGHT, J.L. 0914
- ALBERTSEN, B.E. 0450, 1183
- ALDERSLEY, T. 1220

ALERAY, Z. 1332
 ALESSIEV, A. 0824
 ALFORD, J.A. 1184
 AL-HASHIMI, H. 1362
 AL-HAKIM, M.K. 0350
 ALIM, M.A. 0680
 ALLIETTA, M. 1242
 ALMAKHZOUMI, I. 1362
 ALMEIDA, C.A. 0284, 0696
 ALMIQUIST, J.O. 0001, 0114, 0123, 0124, 0125, 0126,
 0282,, 0333, 0451, 0452, 0453, 0454, 0506, 0613,
 0644, 0667, 0681, 0682, 0825, 0915, 0916, 0917,
 0918, 1148, 1185, 1186, 1187, 1291, 1302, 1402,
 1472, 1481
 AL-TAHA, T.J. 0432, 1165
 AMADOU N'DYAYE, M. 0127
 AMAN, R.P. 0002, 0084, 0085, 0128, 0129, 0249, 0282,
 0917, 0918
 AMERICAN VETERINARY SOCIETY FOR THE STUDY OF BREEDING,
 0130
 AMIN, S.O. 0349
 ANDERSEN, K. 0676
 ANDERSON, H.W. 0455
 ANDERSON, J. 0131, 0132, 0133, 0134, 0135, 0351, 0352,
 0683, 0826, 0919, 0920, 1093
 ANDERSON, W. R. 1117, 1118, 1398
 ANDREWS, F.N. 1484

ANGEL, H. 0456
ANNISON, E.F. 1161
ANSARI, M.R. 0587
ANTAL, J. 0921
ANTONOV, S. 0353
ARBEIVER, E. 0684
ARNOTT, W.J. 0922
ARCULARIUS, H. 0283
ARIA, G. 0430
ARTEM'EV, V.I. 1301
AST, O. 1446
AUSTIN, C.R. 0923, 0924, 0947
AUSTIN, J.W. 0136
AUGLEY, E. 0003
AYLON, N. 1180
AYYAR, R.V. 0685

B

BACIE, M. 1045
BACKER, L.D.S. 1366
BACKSTROM, L. 0199
BACON, D.F. 1316
BACZYNSKI, Z. 1188, 1279
BADER, H. 0791
BAHAM, A. 0699
BAIER, W. 0457

BAKER, F.N. 0827, 1341, 1342
BALASHOV, N. 1189, 1190, 1191
BALL, L. 0004, 0005, 0308, 0958
BALLIS, J. 1028
BAUDET, J. 1403
BANE, A. 0006, 0828, 0925, 1363
BANERJEE, A.K. 1364
BANGHAM, A.D. 1365
BARANY, I. 0946
BARBULESCU, I. 0384
BARKER, C.A.V. 0686, 0926, 1387
BARLOW, A.J.E. 1220
BARNABÉ, R.C. 0284, 0570
BARNABÉ, V.H. 0284
BARNES, H. 0608, 1063
BARRET, G.R. 0458, 0481, 0928
BARRETO, J.F. 0927
BARRON, N.S. 0007
BARTKOWRAK, S. 0558
BARTLETT, J.W. 1036
BARTLETT JUNIOR, F.D. 0653
BAUDET, J. 0521
BAYLEY, N. 0163
BAYOUMI, M.T. 0345
BLAN, B.H. 1262
BEARDEN, H. 0265
BEARDSLEY, J.P. 0159

BEAU, B. 0984
BECK, G.H. 0140, 0141, 0142, 0252, 0616, 1246
BECK, S.D. 1094
BECKER, R.B. 0829
BECKER, W.C. 0073, 0094, 0364, 0800
BECZE, J. 0830
BEDFORD, J.M. 0929
BEKER, L.D.S. 1366
BEKER, S. 1367
BELIK, V.V. 1192, 1193
BENDER, G.M. 1261
BENJAMIN, B.R. 0587
BENNET, G.L. 0261
BENSON, A.A. 1119
BENSON, R.W. 1368
BENTO, C.L.R. 0957
BERG, E. 0472
BERG, J.W. 1369
BERMAN, A. 0660
BERNDTSON, W.E. 0120, 0143, 0144, 0145, 0146, 0203,
0649, 0652, 0687, 0688, 0773, 0789, 0794, 0844,
0930, 1343, 1370, 1396.
BEROUSEK, E.K. 0231
BERRY, W.T. 1399
BERTAND, S. 0931
BERTHELON, M. 0459
BESTEBROES, A.C. 0389
BHARGAVA, P.M. 0354, 1303, 1315, 1371.

BHASKER, B.V. 0355
 BHAT, P.N. 0287
 BHATTACHARYA, B.C. 1372, 1373
 BHATVACHAREJA, M.K. 0460
 BHATTACHARYA, P. 0881, 0892, 1067
 BHERGAVA, P.M. 0932
 BIALY, G. 0009, 0285, 0356
 BIDOT, A. 0357
 BIELANSKI, W. 0831
 BINELLO, D. 0933
 BIRGE, W.J. 1356
 BIRTH-ANDERSEN, A. 0020, 0021, 0022, 0291, 1194
 BISHOP, C. 0224
 BISHOP, M.W. 0147, 0286, 0461, 0932, 0934, 0935,
 1354, 1374
 BISPENG, W. 1285
 BISWAS, J.C. 0287
 BLACKSHAW, A.W. 0358, 0462, 0463, 0464, 0465, 0466,
 0689, 0690, 0711, 0936, 0980, 1095, 1096, 1179
 BLAKE, T.A. 0288
 BLOM, E. 0010, 0011, 0012, 0013, 0014, 0015, 0016,
 0017, 0018, 0019, 0020, 0021, 0022, 0023, 0148,
 0149, 0150, 0151, 0289, 0290, 0291, 0292, 0937,
 1194, 1195, 1196, 1197, 1198, 1375, 1376
 BLUNN, C.T. 0799
 BOATMAN, J.P. 0906
 BOECKX, M. 1199

BOEHNKE, H.J. 0152, 0153, 0938
BOER, M.J. 0389
BOERIN, C. 1283
BOGART, R. 0359, 0498, 0866, 1026
BOLEY, L.E. 1216
BOLTON, T.F.W. 1334
BONADONA, T. 0154, 0293, 0360, 0467, 0468, 0469,
0470, 0471, 0472, 0473, 0939, 0940, 0941, 0942,
0493, 1377, 1378
BOND, J. 0885
BONFERT, M. 0944
BONNEL, H. 1280
BORGOHAIN, B.N. 0489
BORJANOVIC, S. 0175
BORTOFF, A. 0832, 1462
BORYCZKO, Z. 0361, 1200
BOSDEDT, H. 1097
BOTTCHEER, R. 1201
BOULANGER, P. 1450
BOUREANU, A. 0764
BOUTERS, R. 1199
BOYD, L.J. 0155, 0197, 0907, 0945, 1352
BOZÓ, S. 0946
BRADEN, A.W.H. 0924, 0947
BRAGA, W. 0948
BRANAS, R.J. 0126
BRANDL, G. 0882, 1362

BRANNY, J. 1202, 1203
 BRANTON, C. 0156, 0157, 0158, 0241, 0294, 0833, 0834,
 0835, 0836, 0855, 0949, 0952
 BRATANOV, K. 0362, 1344
 BRATKE, E. 1214
 BRATTON, R.W. 0159, 0168, 0490, 0495, 0508, 0617,
 0619, 0691, 0833, 0834, 0836, 1039, 1171, 1235,
 1236
 BRAUN, J. 0055
 BRAVO, D.C. 1379
 BRAZZALE, J. 1447
 BRESCIANI, J. 0117
 BRETSCHNEIDER, L.H. 0295
 BRIERI, J. 1380
 BRIGGS, J.R. 0033
 BRIGHT, T.L. 0113
 BRIGROV, A.D. 0953
 BROCHART, M. 0024, 0160, 0161, 0363, 0405, 0477
 BROCK, W.E. 1503
 BRONSch, K. 0365, 1381
 BROOKS, H.L. 0478
 BROWN, D.V. 0364
 BROWN, L.N. 0227
 BROWN, V.G. 1215
 BRUCE, W. 0692, 0785
 BRUGGEMANN, J. 0365
 BRYAN, H.S. 1216

BRYNER, J.H. 0227
BUCH, N.C. 0693
BUCKNER, P.J. 0162, 0163, 0709
BULANDA, M. 1292
BURBANK, R.C. 0164
BURDA, K. 1339
BURGESS, G.W. 0026
BURROWS, R. 1319
BURVIANA, L.M. 0384, 0694
BUSH, L.J. 1217
BUSHNELL, R.B. 1265
BUSHWAY, A.A. 0366
BUTAKOV, A.K. 1189
BUTLER, C.A. 0954
BWANGAMOI, O. 1218
BYERS, J.H. 0955
BYRD, E.W. 1098

C

CAHDLER; J.E. 0082
CALAPRICE, A. 0956
CALISTI, V. 1382
CALVIN, H.I. 0929
CAMPBELL, J.J.R. 1246
CAMPBELL, R.C. 0165, 0296, 0479, 0934
CANEPA, R. 1383

CANNON, C.Y. 0894
CANTONI, M. 0077
CARDELINO, R. 0890
CARDELINO, S.R.A. 0957
CARDOSO, E.G. 0837
CARL, W.D. 0901
CARPENTER, B. 0695
CARPENTER, M. 0225, 0593, 1051
CARRETA, A. 0480
CARROL, E.J. 0004, 0958
CASADY, R.B. 0838
CASAGRANDE, J.F. 0284, 0297, 0696, 1385
CASIDA, L.E. 0481, 0928, 1121, 1424
CASSON, R. 0166, 0541, 0554, 0697, 0698, 0727, 0959,
0960, 1000
CAVAZOS, L.F. 0410
CEMBROWICZ, H.J. 0638
CERNA, J. 1259
CHALLICE, C.E. 0298
CHAUDLER, J.E. 0249, 0699, 1099
CHANG, M.C. 0025, 0167, 0961
CHAPMAN, M.S. 1219
CHARY, S. 0845
CHASEY, D. 1273
CHATTAWAY, F.W. 1220
CHATURVEDI, S.P. 1100
CHAVES, C.N. 0028

CHECHENETS, V. 0418
CHENG, P. 0481
CHENOWETH, P.J. 0026
CHIEFFI, A. 0482, 0483
CHOI, K.M. 0857, 0886
CHOMINART, R. 1386
CHOANG, C.H. 0027
CHOUDHURY, R.R. 0839
CHRISTENSEN, O.O. 0292
CHRISTIAN JUNIOR, J.J. 0874
CHU, H.P. 1221
CHURCH, K.E. 0028
CHURY, J. 1345
CLARK, E.W. 1101
CLARK, R.H. 0962
CLEGG, E.D. 0366, 0367, 0700
COBBS, H.W. 0458
COELHO, N.M. 1222
COLLERY, L. 0029
COLLINS, W.J. 0168
COLTRAN, G. 0384
COMMONWEALTH BUREAU OF ANIMAL BREEDING AND GENETICS
0484, 0485, 0963
COMSTOCK, R.E. 0169
CONCHIE, J. 0368
CONNOR, M.L. 0249, 0486, 0788
CONRAD, E.O. 0709

COOKE, D.F. 1387
COOPER, G.W. 0929
CORDIEZ, E. 0528, 1250
CORRIAS, A. 1223
CORTEEL, J.M. 1346
CORVALAN, P. 0170, 0701
COSTERTON, J.W. 0031
COTTRAL, G.E. 1224
COUBROUGH, R.I. 0030
COULTER, G.H. 0031, 0299, 0369, 0702, 0844, 1225
COUROT, M. 0105, 0171, 0325, 0964
COURTENS, J.L. 0105, 0370
COUTURIER, L.R. 0815
COX, B.F. 1224
COX, C.P. 1388
COWAN, W.A. 0244, 0717, 0774, 0776
CRABO, B. 0050, 0371, 1360
CRAGLE, R.G. 0372, 0487, 1155
CRAN, D.G. 0032
CRAVEN, J. 0945
CRESPO GARCIA, J. 0172, 0300
CRISTIAN Jr., J.J. 0874
CRISTOFORI, F. 0430
CROMBACH, J.J.M.L. 0965, 0966
CRUTHERS, J.C. 0157
CUBETTA, P. 1223
CUELLAR CARRASCO; L. 1102

CUESTA, A. 0416
CUMMINGS, J.N. 0173
CUNHA, S. 0891, 0892
CUNHA, T.J. 0870
CUPPS, P.T. 0033, 0174, 0616, 0840, 0967
CURSON, B. 0627, 1304, 1320
CVETKOV, B. 0175
CZARI, M. 1279

D

DALGAARD.MIKKCLSEN, S. 0373, 1103
DAM, A. 1195, 1196
DAMITROPOULOS, E. 0488, 0528
DANASOURY, M.S. 0349
DANOV, D. 0362, 0824
DARCEL, C. 1225, 1226
D'ARENSBOURG, G. 0949
DARIN-BENNETT, A 0444
DAS, A. 0489
DAUZIER, L. 0968
DAVE, B.K. 1104
DAVIDOVIC, A. 0175
DAVIS, H.P. 0340, 0650, 0799, 1159
DAVIS, I,S. 0490
DAWE, P. 1319

DAWSON, R.M.C. 1273, 1347
DE ABREU, R.M. 0120
DEAS, D.W. 1258
DELV, S.B. 1389
DEBRUYNE, R. 0703
DE GROOT, B. 0704, 0966, 1410
DELEU, V. 0491, 1390
DELLO JORO, T. 0956
DEMMA, A 0374
DENISOV, N.I. 1078
DESARI, R.B. 1162
DESCHAMPS, J.C. 0176, 0890, 0957
DESHPANDE, B.R. 0034, 1162, 1172
DERBOL, Z 1028
DERIVAUX, J. 0969
DE ROVER, W. 0966
DESJARDINS, C. 0177
DE VUYST, A. 0970
DE WITT, J.J.O. 1105
DIAS, T.S. 1043, 1447
DIBIROV, M.K. 0375
DICKENSHECT, M. 0597
DICKERSON, G.E. 0549
DICKY, J.F. 1441
DIETS, R.W. 1106, 1107
DIKOV, V. 0362
DI LIELLO, L.R. 1227

DIMITROPOULOS, E. 0971, 1250
DIMITROPOULOS, R. 0178
DION, W.M. 0841
DJAMBAZOV, G. 0547
DOCKE, F. 0179, 0705
DOCTON, F.L. 1108
DOHAN, C.R. 0180
DOICHEV, S. 0547
DOICHEVA, M. 0376
DOJSSEVA, M. 0377
DOKOV, V.K. 0770
DONALD, H.P. 0035
DONALDSON, L.E. 0972
DONKER, J.D. 0975
DORA, J. 0873
DOREY, C. 0745
DOROZHILOV, A.E. 0706, 0707
DOTT, H.M. 0032, 0181, 0973, 1109
DOUCHERTY, R.W. 0182
DOYCHEVA, M. 1344
DREHER, W.H. 0492
DREPPER, K. 0365
DREVINS, L.O. 0493
DUBAY, M.L. 0494, 0612
DUBIEL, A. 1313
DUCHATEAU, A.B. 1336
DUNAY, A. 0946

DUNBAR, R.S. 0159, 1462
DUNCAN, C.W. 0429
DUNN, H.O. 0159, 0495, 0496, 0509, 0691, 0708, 0709,
0835, 0974, 1110, 1339, 1392
DURAIWANU, S. 0845
DURKO, I. 1328
DURUKAWA, H. 0761
DUVERGER, O. 1452
DYCKA, J. 0904
DYNAROWICZ, I. 1451
DYRENDAHL, I. 0497, 0976
DZINK, P.J. 0975, 1393

E

EASLEY, G.T. 0498, 0866
EASTERBROOKS, H.L. 0499, 1228, 1229
EDELMAN, G.M. 0378
EDMONDSON, J.E. 1230
EDWARDS, J. 0479
EFREMOVA, V. 1344
EHLERS, M.H. 0379, 0914, 1111
EIBL, K. 1000
EICKMANN, H. 0183
EILER, H. 0848, 0977
EINARSON, S. 0051
EINNEN, B.D. 0789, 1396
EKMAN, L. 1360, 1394

ELER, J.P. 0978
ELGERMA, A. 0389
EL-GUINDI, M.M. 0345, 0346, 0380, 0822, 1091, 1092
ELLIOT, F.L. 0184, 0264, 0478, 0524, 0618, 0979,
1231, 1395
ELLIOT, I. 0142, 0252, 0616
ELLIOTT, E.J. 1395
ELLIOTT, F.I. 1497
ELLIS, D.J. 1238
EL-MENOUFY, A.A. 0346, 1091, 1092
EL-NAGGAR, M.A. 0500
EL-SAWAF, S.A. 0842
EL-WISHY, A.B. 0842
ELY, F. 0056, 0386, 0714, 1108, 1112, 1217
EMMENS, C.W. 0358, 0690, 0980, 1179, 1397
ENIN, V.P. 0501
ERB, R.E. 0379, 0502, 0914, 0981, 1111
ERICKSON, W.E. 0982
ERNO, H. 1197, 1232
ERSHOV, V.I. 0636
ESSICH, G. 0713
ETGEN, W.M. 0714
EVANS, B.M. 1373
EVCHENKO, L. 1189
EVERETT, R.W. 0984
EVERSEN, B.K. 0195

EWALT, H.P. 0182

EZAZ, Z. 0248

F

FABER, J.E. 1227

FACELLO, C. 0430

FARAG, Y.A. 1233

FARRELY, B.T. 0185

FAUKNER, L.C. 0186, 1009

FAWEETT, D.W. 0037

FEJES, J. 0036, 0503

FEREDEAN, T. 0764

FERGUSON, L.C. 1108, 1217

FERRURA NETO, J.M. 0900

FILSETH, O. 0985

FIORENTINO, A. 0504, 0505

FIRST, N.L. 0436

FISCHER, A. 0604

FISCHER, P.C. 0604

FISH, N.A. 1277

FISHER, G.R. 0715

FITZGERALD, P.R. 1234

FLECHON, J.E. 0412

FLEMING, W.N. 0187, 1449

FLERCHINGER, F.H. 0089, 0379, 0502, 0981

FLIPSE, R.J. 0381, 0453, 0506, 0613, 1106, 1107,
1113, 1114, 1115, 1116, 1117, 1118, 1119, 1127, 1398

FLOOD, J.C. 0691
FLORIN, B. 0188
FONSECA, V.O. 0189, 0301, 0987
FOOTE, R.H. 0143, 0157, 0158, 0159, 0299, 0367, 0490,
0507, 0508, 0509, 0545, 0632, 0633, 0673, 0687,
0691, 0702, 0716, 0835, 0844, 0950, 0951, 0984,
0986, 0987, 1235, 1236, 1237.
FOREJTEK, M. 1282
FORGASON, J.L. 1399
FOSGATE, O.T. 0510
FOULKES, J.A. 0190, 0511, 0512, 0513, 0514, 0515,
0516, 0988.
FOWLER, A.K. 0717, 0774
FRANCHIMONT, P. 0845
FRANK, A.H. 1348
FRAPPELL, J.P. 0989
FREI, L. 0232
FRIEND, D.S. 0037
FRITSCH, W. 0517
FRONCZEK, T. 1313
FROSETH, J.A. 0364
FUROWICZ, A. 0361, 1292
FUTUJMA, T. 0210

G

GAAL, J. 1130
GAC-JEGOU, F. 1131
GAGGIL, B.A. 1162, 1172
GAILIUNAS, P. 1224
GALF, D. 1046
GALLIEN, L. 0990
GAMCIK, P. 0038, 0302
GAMENTZY, Z. 1283
GAMULYA, G.D. 0762
GANGULI, N.C. 0039, 1364
GARCIA, O.S. 0040, 0041, 0107, 0872, 0900, 1400
GARCIA MATA, E. 0191
GARNER, D.L. 0718
GARRETT, O F. 1110
GASSNER, F.X. 0518, 1009, 1120, 1413
GASTAUER, R. 0382, 1097
GEBAUER, M.R. 1368
GEMIN, D.I. 0303
GEORGIEV, G.K. 0519, 0770
GERARD, M. 1076
GERBER, L.E. 0042, 0081, 0800
GEROGIEV, B. 0824
GERRITS, R.J. 0885
GETTY, S.M. 1238

GLOSH, D. 1121, 1122
GIBBONS, R.A. 1074
GIBSON, E.W. 0243, 0775
GIBSON, L.A.S. 1401
GIERLOFF; B.C.H. 1239
GILBERT, G.R. 1402
GILES, K.H. 1031
GILLER, I.P. 0383
GILLETE, E.L. 0304
GINKEVICKYUS, R.A. 0767, 1463
GINOV, I. 1280
GIORGI, W. 1240
GLADIGAU, V. 1241
GLANTZ, P.J. 1185, 1186
GLEDHILL, B.L. 0043, 0044, 0192
GLEDHILL, M.P. 0044, 0846
GLEW, G. 1123
GLOGOWSKI, J. 0433, 0520
GLOVER, F.A. 0224
GLOVER, T.D. 0045, 0847
GOFFAUX, M. 0046, 0193, 0194, 0521, 0991, 1242, 1403
GOLDBERG, E. 1147
GOMES, W.V. 1442
GOODEAUX, L.L. 1098
GOODEY, R.G. 0513, 0514, 0515, 1219
GOODWIN, D.E. 1399
GOROKLOV, L.N. 1404

GOSSLEE, D.G. 0244, 0717
GOSSLER, R. 1243
GOTZE, R. 0992
GOWDA, H.C. 1124
GRABLJEVEC, A. 0658
GRAÇA, V. de P. 0880
GRAHAM, E.F. 0079, 0092, 0195, 0350, 0585, 0591,
0599, 0712, 0715, 0719, 0743, 0975, 0982, 0993,
0994, 1025, 1393, 1405, 1406
GRAVES, C.N. 0320, 0848, 0977, 1104, 1155, 1407
GRAY, J. 0305
GREEN, W.W. 0169
GREITZ, V. 1394
GREIFF, W. 0457
GRIFFIN, J.F.T. 0522, 0523
GRIFFITHS, D.E. 0445
GRILL, L.C. 0002
GRINER, L.A. 0004
GRODNITSKN, V.I. 1461
GROSH, D. 1136
GROOVENHUIS, G. 0721
GROVE, D. 0196, 0995
GRUND, S. 0722
GRUNNET, N.T. 1244
GRUZDEV, N.V. 1168
GUERRA, D. 0873
GUERREIRO, R.T.C. 1408

GUEVARA, M.P. 1245

GUHA, S. 0892

GUILLO, B. 1295

GUNTHER, A.H. 1373

GUNSALUS, I.C. 1246, 1247

GUSTAFSSON, B. 0047, 0051, 0093, 0371, 0996, 0997,
1336, 1394

H

HAASE, H. 0306, 1333

HACKETT, A.J. 1409

HADARAG, E. 0384

HAFES, E.S.E. 0849, 0998

HAFN, J. 0525, 0526

HAFS, H.D. 0177, 0197, 0524, 0708, 0709, 1037, 1392

HAG, I. 0007, 0850, 0999

HAGELSTENI, M.T. 0845

HAHN, J. 0844, 1097

HAHN, R. 1000, 1001, 1097

HAKKESTEEGT, E. 1248

HALL, C.R. 0243

HALL JUNIOR, R.C. 0775

HALLET, F.R. 1387

HAMMOND, D.M. 1234

HAMMOND, J. 1002

HANCOCK, J.L. 0035, 0052, 0053, 0054, 0147, 0165,
0198, 0307, 0851, 0934, 1249, 1365
HANSEN, R.G. 0656, 1137
HANSON, R.D. 1449
HARASYMOWYCZ, J. 0308
HARGRAVE, D.D. 0870
HARLAN, D.V.M. 1265
HARLAY, T. 1242
HARRISON, R.A.P. 0527
HART, G.H. 0330
HART, N.L. 0560, 0561, 1031
HARTIGAN, P.J. 0522, 0523
HASSAN, A.G. 0055
HAVARESHTI, P. 1336
HAYS, R.L. 1081
HEBERT, C.N. 0556, 0988, 1219
HECZKO, P.B. 1292
HEDEBRO-VELANDER, I. 0661
HEFFEY, P.J. 0113, 0277
HEINETSON, R.W. 0962
HELLER, P. 0478, 1229
HENDERSON, C.R. 0158, 0159, 0168, 0951
HENDERSON, J.A. 1003
HENDRIKSE, J. 0385, 0704, 1410
HENLE, G. 1125, 1126
HENNAUX, L. 0528, 1250
HENRICSON, B. 0199

HENRIET, L. 1411
HERMAM, H.A. 0231, 0275, 0548, 0549, 0596, 0597,
0598, 0807. 0908, 1004, 1005, 1006, 1073, 1112,
1230, 1489
HERRICK, J.B. 0200, 0201, 0529
HERRNLEBEN, H.G. 0309
HESS, E.A. 0056, 0356, 0386, 0714
HEWETSON, R.W. 0723
HEYMAN, Y 1007, 1076
HIBNER, A. 0210
HICKMAN, C.G. 1412
HILL, H.J. 0310, 0518, 1170, 1413
HILLERS, J.K. 0094
GINGS, E.C. 0411
HIRAMIRNE, T. 1251
HIRTL, R.S. 1252, 1253, 1354
HLOUSEK, A. 1414
HOAGLAND, H. 1008
HODGES; R.T. 0387
HOELZER, H. 0530
HOFFMANN-WOZMAK, K. 1255
HOLLAND, J.T.S. 0387
HOLLANDE, E. 0395
HOLMSTROM, B.G. 0746
HOLT, A.F. 0531, 0532, 0785
HOLTMAN, M. 00051
HOLY, L. 0852

HOMAN, N. 1413
HOPWOD, M.L. 0186, 0388, 0518, 1009, 1120
HORAK, J. 0390
HORAKOVÁ, A. 0390
HORST, C.J.G. VAN DER. 0389
HOSAJA, M. 0432
HOSKINS, D.D. 0347
HOUREGAN, J.L. 1256
HOWE, G.R. 1127
HRUDKA, F. 0390
HUBE, A. 0724
HUGGLER, C. 1352
HUHN, J. 1128
HUKERI, V.B. 1162, 1172
HULKA, J.F. 1052
HULTNAS, C.A. 1010
HUMPHREY, G.F. 0533, 1129
HUNTER, W.K. 0534
HUP, E.W. 0136
HURST, V. 0213, 0214, 0215, 0240, 0535, 0536

I

IANCONESCU, M. 1297
IBRAHIM, M.A.R. 1130
IBRAHIM, M.M. 0537, 1199
IDRIS, O.E. 0538, 1415

IEEKOVIC, U. 1046
IGLESIAS, C. 0752
ILGUNAS, B. 1463
ILYUKLINA, L.A. 1078
INEICHEN, B. 0202
INGALLS, W. 1352
IRAMAIN, C.A. 0391
IRIE, S. 0586
IRITANI, A. 0725, 0758, 0759, 1416
ISA, J.M. 0091
ISEMBERG, H.D. 1417
ISHU, K. 0726
ISMAIL, F. 1362
ITO, S. 1432
IVANOV, A.T. 0539
IYER, C.P.M. 0537

J

JACQUET, J. 1011
JACZEWSKI, S. 1012, 1451
JAKOBSEN, K.F. 0779, 1239, 1418
JAMES, C.B. 0952
JANSEN, P.F.J. 1410
JAQUET, J. 0540, 0541, 0727
JARVIS, B.D.W. 1215, 1257, 1316
JASKOWSKI, L. 0057, 0553, 0544, 0545

JAZDZEWSKI, J. 0853
 JAZKOWSKI, L. 0854
 JENICHEN, W. 0728
 JESPERSEN, C. 0122
 JIRANEK, E. 0311, 1259
 JOHNSON, L. 0203, 0885
 JOHNSON, M.E. 1261
 JOHNSTON, J.E. 0204, 0855, 0949, 1013, 1014, 1072
 JOHNSTON, W.S. 1258
 JOKINEN, L. 0729, 0746
 JONDET, M. 0737, 0738, 0739, 0740, 1421
 JONDET, R. 0205, 0206, 0207, 0208, 0209, 0235, 0546,
 0730, 0731, 0732, 0733, 0734, 0735, 0736, 0737,
 0738, 0739, 0740, 1015, 1016, 1017, 1349, 1419,
 1420, 1421
 JONES, E.W. 1503
 JONES, R.C. 0741, 1274
 JONES, W.A. 0058, 0312
 JORDÃO, L.P. 1350
 JOVANOVIĆ, V. 1045
 JUNGHERR, E.L. 0478
 JURGENS, F. 0393
 JURMANOVA, K. 1259, 1260
 JUSZCZAK, J. 0210
 JUSZKIEWICZ, T. 0553

KAEMMERER, K. 1018
KAHRS, R.F. 1261, 1262, 1263
KAISER, O. 0211
KAKAR, M.L. 0394
KAKAR, S.S. 0039
KALEV, G. 0547, 0742, 1264
KALIG, E. 1040
KAMAROV, N.I. 0212
KAMINJOLO, J.S. 1218
KAMPSCHMIDT, R.F. 0548, 0549
KANDJERA, L. 1046
KANN, M.L. 0395
KAPOOR, P.D. 0396
KARRAS, W. 0060, 1422, 1423
KASHIWABARA, T. 0397
KATABIRA, I. 0761
KELLGREN, H.C. 0156, 0246, 0247, 0249, 0474, 0769
KELLY, J.W. 0213, 0214, 0215
KELLY, W.R. 1249
KENDRICK, J.W. 1265, 1266
KERUS, V.K. 0061, 0858
KESSLER, H. 0313
KEYNES, R.D. 1372
KHALIL, H. 0694
KLONOPULO, N.P. 1019

KICHEV, G. 1440
KIDDY, C.A. 1424
KIHLSSTROM, J.E. 0065, 1434
KIM, K. 1425, 1426
KIM, S. 0216, 0856, 0857, 0886, 1426
KINAST, F. 1132
KING, G.J. 0098, 0448, 0750
KING, T.E. 1133
KINGSBURY, E. 0745
KINNEY, W.C. 0550
KIRCHELLE, S. 1267
KIRTON, K.T. 1020, 1351
KLINGSPORN; A.L. 1256
KNEZEVEC, D. 0175
KNIGHT, R.P. 1427
KNOTT, C.B. 0619, 1134, 1187
KNUDSEN, O. 0314, 0315
KODAGALI, S.B. 0061, 0858
KOEFOED-JOHNSEN, H.H. 0062, 0117, 1135
KOHLEK, W. 0860
KOJIMA, Y. 0316
KOK, J.C.N. 0551, 0552
KOLLER, R. 0859
KOLLIKER, A. 1021
KOLUMBIÉ, T. 1275
KOMAREK, R.J. 0419, 0420
KOREN, E. 0399

KORPAN, A.I. 1293
KORUDZHUSKI, N. 1268
KOSTADINOV, B. 0431, 0639
KOTHS, M.E. 1300
KOTO, K. 0761
KOVACEVIC, M. 1276
KOVALEV, M.G. 1428
KOZLO, N.E. 1429
KPZLOWSKA, L. 0553
KRAMPITZ, G. 1018
KRAUSE, D. 0152, 0860, 1285, 1430
KREDE, F. 0415, 0416
KRINSKY, M. 1321
KRISHNA RAO, C. 0063, 0217, 0317, 1022
KROLINSKI, J. 1269
KRONLUND, N. 1265
KRZYZANOWSKI, J. 0861, 0862, 0863
KUHLMAN, D.E. 1498
KUMAR, R. 0326
KUPFERSCHMIED, H. 0218, 1325
KYAN, M.H. 0219

L

LABEN, R.C. 0174, 0840, 0967
LACHOWSKI, A. 0864
LAGERLOF, N. 0064, 0220, 0318, 0319, 1023

LAING, J.A. 0865
LAMASTER, J.P. 0536
LAMBERT, W.V. 1024
LAMOTHE, P. 0898
LAMPERSKI, B. 0582, 0583
LANDA, C.A. 0681
LANG, L. 1001
LAPLAUD, M. 0554
LARCHIER, H. 0459
LARDY, H.A. 0594, 1121, 1122, 1136, 1137, 1138
LARSEN, A.B. 0227
LARSON, G.L. 0496, 0670, 0743, 0974, 1025
LASLEY, J.F. 0221, 0866, 0867, 1026
LATALA-NIEDZIELSKA, M. 1270
LAZCAR, E.J. 1108
LEE, A.J. 1352
LEE, K.M. 0216, 1425
LEIDL, W. 0055, 0457, 0555, 0744
LEIPNITZ, C. 1289, 1431
LEMARINIER, S. 0727
LEMONS, G.B. 0270
LENKUTIS, V. 1463
LENZ, H. 1271
LENZ, R.W. 0320
LEOPARD, O.L. 1036, 1110
LETARD, E. 1027, 1028
LEUCHTENBERGER, C. 1432

LEVASSEUR, M.C. 1077
LEVERAGE, W.E. 0745
LIKAR, I. 1029
LIKAR, L. 1029
LIMA, O.P. 0301
LINARES, I.A. 0222
LINCOLN, G.I. 0446
LINDAHL, P.E. 0065, 0223, 0398, 1433, 1434
LINDEMANN, C. 1030
LINDSTROM, V. 0746, 0729
LINDWICK, T.M. 1217
LINFORD, E. 0224, 0556
LODGE, J.R. 0320, 1356
LOHLE, K. 0798
LOIR, M. 0370
LOPATKO, M.I. 0076
LORETON, K. 1280
LORRMANN, W. 0904, 1001, 1272
LOSINSKI, T. 1311
LOVELOCK, J.E. 0557, 0780
LOW, M. 1360
LUCAS, A.L. 1051
LUCAS, J.J. 0243, 0775, 1368
LUCAS, M.H. 1219, 1273
LUDWICK, T.M. 0056, 0225, 0356, 0386, 0714
LUECK, R.W. 0429
LUEDCK, A.J. 1274

LUHMANN, P. 0901
LUKAC, J. 0399
LUKACEVIC, J. 1275, 1276
LUNDGREN, B. 0226
LUTWALK-MANN, C. 0400, 0406, 1144
LYCZYNSKI, A. 0558
LYLE, W.E. 0227

M

MAC FARLANE, J.S. 0401, 0896
MACFEE, A.F. 0747, 0748
MACHADO, C.R. 1139
MACHADO, R.Z. 1139
MACKLE, W. 0559
MAC LEOD, J. 0402
MAC LEOD, R. 0028
MAC MILLAN, I. 0448
MAC MILLAN, E.W. 0066
MAC MILLAN, K.L. 0321, 0560, 0561, 1031
MAC PHERSON, J.W. 0067, 0098, 0228, 0229, 0562, 0749,
0750, 1032, 1277, 1409, 1435, 1436, 1437
MADDEN, D.H.L. 0230
MADDEN, F.W. 0231, 1005
MAHAJAN, S.C. 1033
MAHLER, D. 1160, 1201
MAHONEY, G.W.A. 0879

MAHRLA, A. 1278
 MAJEWSKA, H. 1279
 MALENO MALENOTTI, P. 1383
 MALINOVSKN, I.F. 0539
 MANN, T. 0368, 0403, 0404, 0405, 0406, 0533, 0543,
 0563, 0564, 0565, 0566, 0567, 1035, 1129, 1133,
 1140, 1141, 1142, 1143, 1144, 1319
 MANTON, V.J.A. 1439
 MARCHIANI, W.D. 0751
 MARGALIN, S. 1036
 MARINOV, P. 0868, 1280, 1281, 1440
 MARION, G.B. 0975
 MARKS, J. 0456
 MARRE, H. 0153, 0938
 MARSHALL, C.E. 0068, 0232, 0249, 0334, 0568, 1037
 MARTIG, R.C. 0386, 0776, 1441
 MARTIN, I.C.A. 0233, 0569, 1397
 MARTINEZ, G. 0752
 MARTINI, E. 0407
 MASCARENHAS, H. 1442
 MASOTI, N. 0570
 MATA, E.G. 1038
 MATHER, E.C. 1336
 MATHUR, A.L. 0460
 MATOUSEK, J. 0408, 0571
 MATSUMOTO, T. 0397
 MATTNER, P.E. 0069

MAULE, J.P. 0322
MAUPOUME, R. 1443
MAXIMOV, N.A. 0409
MAYER, D.T. 0359, 0498, 0548, 0549, 0807, 0867, 1487
MAYEWSKA, H. 1188
MAZUROVÁ, J. 1282
MC COSKER, P.J. 0070
MC CULLAGH, E.P. 1065
MC ENTEE, K. 0071, 0869, 1266
MEACHAM, T.N. 0870
MEAD, S.W. 0174
MEDING, J.H. 0122
MEDREA, N. 1283
MEGALE, F. 0107, 0271, 0871, 0872
MELAMPY, R.M. 0410, 0421
MELLAD, K.E. 0411
MELNIKOVA, T.S. 1078
MELROSE, D.R. 0072, 0572, 0573, 0574, 0634, 0945,
1145, 1388
MENENDEZ, A. 0873
MENEZO, Y. 0412
MENGE, A.C. 0874, 1033
MERCIER, E. 0090, 0273, 0323, 0836, 0875, 0876, 0877,
1039
MEREDETH, M.J. 1284
MERILAN, C.P. 1467
MERKT, H. 0234, 1001

MERYMAN, H.T. 1040
MESSEIN, Y. 0194
MESZAROS; S. 0878
MEYER, M. 1285
MEYERHOEFFER, D.C. 0879
MICHAJILOV, N.N. 0575
MIES FILHO, A. 0208, 0235, 0576, 0880, 0927, 1041,
1042, 1043, 1044, 1444, 1445, 1446, 1447, 1448
MIKHAILOV, N.N. 1286, 1287
MIKOTA, L.E. 0502
MILAKOVIE, L. 1275, 1276
MILJKOVIC, V. 1045, 1046
MILLAR, P.G. 0413
Miller, W.J. 0577
MILLEVVE, C.F. 0378
MILONAVOV, V.K. 0578
MINARIK, J. 1345
MINER, M.L. 1234
MIOTTI, T. 0324
MITCHELL, D. 1226
MIXNER, J.P. 0579, 0580, 0581, 0643, 0753, 0811, 1013,
1014, 1047, 1048, 1072, 1166, 1449
MIYAMOTO, H. 0754
MIZON, J. 1450
MOELLER, A.N. 1082, 1353
MOLAN, P.C. 1320
MOLINARI, G. 0628

MONKIEWICZ, J. 1451
 MONTES, I. 0416
 MORALES, J.R. 0873, 1452
 MORGAN, W.J. 1288
 MORITÄ, Z 0726
 MORRIS, P.G.D. 1453
 MORROW, D.A. 0144
 MORSTIN, J. 0325, 0582, 0583
 MORTIMER, R.G. 0794, 1396, 1454
 MORTINER, W.E. 0755
 MOSS, J.A. 0785
 MOSSE, G. 0756, 1455
 MRVOS, G. 1045
 MUDRA, K. 0797
 MUKHERJEE, D.P. 0881
 MULLEN, J.E.C. 0999
 MULLER, E. 0236, 0414, 0584, 0882, 0883, 1289, 1362,
 1456
 MULLINS, J. 0249
 MUNKER, W. 1290
 MUNRO, I.B. 0072
 MUKHERYEE, D.P. 0326
 MURMANIS, I. 1432
 MURPHEREE, R.L. 0136
 MURPHY, J.M. 1110
 MUSGRAVE, S.D. 0159, 0476, 0835, 1503
 MYANMOTO, H. 1146

N

NAGASE, H. 0237, 0585, 0586, 1457, 1458, 1459

NAGORNYI, E.P. 1460

NAHLIK, K. 0853

NAIDU, M. 0587

NAMBIAR, K.G. 0078

NARABAYASHI, N.T. 1155

NARITÄ, M. 1251

NAUK, V. 1390

NEBEL, R.L. 0699

NEBOGATIKOV, G.V. 1461

NEDYALKOV, K. 1050

NEGOITA, E. 0764

NEGOITÄ, V. 0757

NEITZ, W.O. 0896

NELSON, D.S. 0092

NEPORADA, V.P. 1293

NEWLOOK, C. 0321

NEWSON, M.H. 0241, 0475

NEWSTEAD, J.D. 0344

NICALESU, S. 0694

NICANDER, L. 0006, 0051, 0337

NIKULENKO, V.V. 0706, 0707

NILLSEN, S.W. 1252, 1253

NISHIKAWA, Y. 0588, 0725, 0754, 0758, 0759, 1146
NIWA, Y.K. 1416, 1457, 1458, 1459
NOIMAN, C. 0589, 0760, 1147, 1462
NOWAKOWSKI, W. 1292
NYBERG, J.A. 1360

O

O'DELL, W.T. 1148
ODILI, P.I. 0391
OGATA, T. 0761
OGAWA, S. 0758
OHMS, J.I. 1089
O'HOGAN, C. 0262
OKO, R.J. 0031
OLAR, T.R. 0073
OLDS, D. 0225, 0590, 0884, 1051
OLGIATI, L. 0154, 0472
OLIVEIRA, J.F.A. 0890
OLIVER, L. 0590, 0884
OLLIVER, J.P. 0242
OLOUFA, M. 0349, 0799
OLSEN, H. 0327
OLTJEN, R.R. 0885
OMRAN, K.F. 1052
ONSTAD, O. 0074
ONUFRIEV, P.V. 1078

OREL, V. 1149
ORLOVSKII, I. A. 0238
ORRIS, S. E. 0425
ORTAVANT, R. 0075, 0171, 1053, 1150
OSTASHKO, F. I. 0076, 0762, 1054
OSTERGAARD, P. S. 0611
OSTEUX, T. 1450
OTEL, V. 0757, 0763, 0764
OTSULI, K. 0588
OWASOYO, J. O. 0391
OZKOCA, A. 0765

P

PACE, M. M. 0591, 0766, 994
PAGOT, M. 1028
PAKENAS, P. I. 0767
PALII, G. K. 1293
PANAZZOLO, A. 0628
PANFER, S. 1294
PARDUBICE, M. 1318
PAREDIZ, F. 1083
PAREZ, M. 0046, 0768, 1028, 1295
PARK, H. K. 0856, 0857
PARKENAS, P. I. 1462
PARKES, A. S. 0781, 1471
PARSONSON, I. M. 1296

PASS, B.C. 0240
PATRICK, T.E. 0156, 0241, 0246, 0247, 0474, 0769
PATTABIRAMAN, S.R. 0893
PATTON, S. 0506
PAULENKO, M.P. 0592
PAULSEN, J. 1243
PAULSEN, L. 1464
PEDERSEN, H. 0062, 0683
PEDROSO, R. 0415, 0416
PEEK, J.C. 0887
PEET, R.L. 0328
PELEG, B.A. 1297
PELETIKOVÁ, J. 0408
PELLERZI, A. 0077
PELLOT, J. 0242
PENNER, P. 1435, 1436
PERETURINA, M.F. 0104
PERIANU, T. 1312
PERKINS, J.R. 0593
PERKUCIN, V. 1045, 1046
PETERSEN, W.E. 0975
PETROV, Z.Z. 0770, 1298
PETRUK, Ye.M. 0417
PETRUSHIN, V.L. 0767
PEVZNER, I. 0418
PFEILSTICKER, J. 0153, 0791, 0938, 1465
PHILLIPS, P.H. 0594, 0771, 1137, 1138

PHILLIPS, R.W. 0888
 PHILPOT, W.N. 1503
 PIASECKA-SERAFFIN, M. 1299
 PICHA, J. 0408
 PICHOVÁ, D. 408
 PICKETT, B.W. 0120, 0144, 0145, 0146, 0203, 0243,
 0244, 0419, 0420, 0595, 0649, 0652, 0688, 0700,
 0717, 0772, 0773, 0774, 0775, 0776, 0789, 0794,
 0930, 1343, 1368, 1370, 1396, 1466, 1467
 PIECHACZEK, J. 1012
 PIETRASZER, A. 0674
 PILCH, J. 0889, 1468
 PILZ, A. 1469
 PIMENTEL, C.A. 0176, 0890, 0957
 PINCUS, G. 1008
 PINTO, P.A. 0270, 0271, 0911, 1139, 1240, 1470
 PIPER, A. 0777
 PLAUT, E.W.E. 1136
 PLASTRIDGE, W.N. 0478, 1229, 1254, 1300
 POLGE, C. 0557, 0778, 0779, 0780, 0781, 0782, 0783,
 0784, 0785, 0793, 0805, 0806, 1471
 POOL, S.H. 1098
 POPOVICI, M. 0757
 PORTER, J.C. 0410, 0421
 POSPELOV, A.I. 1301
 POTTER, F.E. 0381
 POZZI, G.C. 0472, 0473

PRABHU, S.S. 0891, 0892
PRIBANIC, M. 0399
PRINCE, P.W. 1302, 1472
PRINZEN, R. 0422
PROBINE, B.W. 0930
PROCHAZKA, F. 1345
PRUDOVSKY, S. 1180
PUNTRIANO, G.O. 0423
PURSLEY, G.R. 0596, 0597, 0598
PUSTIGLIONE NETO, L. 1303, 1304

Q

QUACQUARINI, P. 1382

R

RABADEUX, Y. 0208, 0209, 0734, 0735, 0736, 0737,
0738, 0739, 0740, 1419, 1420, 1421
RABECH, N.O. 0122, 0449, 0603
RADEV, G. 0362
RADHAKRISHMAN, R. 0893
RAHLMANN, D.F. 0840
RAJA, C.D.S.V. 0078, 0600
RAJAMANNAN, A.H.J. 0079, 0599, 1473, 1474
RAJKONWAR, C.K. 0489
RALSTON, N.P. 1070

RAMADAS, K. 0600
RAMOS, A.A. 1044
RANGANATHAN, M.R. 0898
RAO, A.R. 0050, 0329
RAO, A.S.P. 0589
RAO, C.K. 0330
RAO, D.N. 0601, 0602
RAO, M.B. 1475
RAO, T.L.N. 0329
RAPATZ, G.L. 0787, 0894
RASBECH, N.O. 1182
RASTELLI, V. 1383
RATAN, P.J.S. 1475
RATAN SINGH, A. 0601, 0602, 0817
RAWAL, J.S. 1361
RAWSON, L.E.A. 0782, 0783, 0784, 0785
REDDON, A.R. 0967
REDDY, B.J.C. 1305
REDDY, E.S.P. 1306, 1315
REID, J.T. 0424, 0895, 1302
REINHARD, H.J. 0860
REMPT, D. 1307
RETIEF, G.P. 0896
REVELL, S.G. 1476
RICHARD, H.E. 0056, 0714
RICHARDSON, A. 1308
RICHEME, E. 0171

RICHTER, L. 0790, 0897
RIGLER Jr., R. 0044
RIKMENSPÖEL, R. 0425, 0426, 1030
RIMAROVA, L.D. 0274
RINGERTZ, N.R. 0044
RITTMANNSPERGER, F. 0883
ROB, O. 0080, 0311, 1309
ROBBINS, R.K. 0081, 0082, 0486, 0614, 0788
RODEL, L. 0331
RODINA, V. 1190, 1191, 1310
RODRIGUES GAPETON, M. 0473
RODRIGUES, O.L. 0789
ROEHE, R. 0234
ROHLOFF, D. 0604, 0722
ROLLINSON, D.H.L. 0053, 0083, 0427, 1060, 1477
ROMENY, E. 0790
ROMER, O. 1198
ROMIJN, C. 1151, 1152
ROOS, B. 0791
ROOK, A. 1061
ROOSEN-RUNGE, E.C. 1062
ROSA, A.J. 1448
ROSE, M. 0605
ROSEMBERGER, J.L. 0126
ROSLANOWSKI, K. 1311
ROSTAND, J. 0606

ROTHCHILD, M.G. 0165, 0345, 0607, 0608, 1063, 1101,
1478, 1479
ROTTENSTEN, K. 0609, 0610, 0611, 1064
ROUSSEL, J.D. 0246, 0247
ROUX, P. 0990
ROWSON, L.E.A. 0400, 0792, 0793, 0816, 1002, 1480
ROY, A. 1354, 1361
ROYCHOUDHURY, P.N. 0360, 0428, 0612
ROZIN, S. 1153
RUDINSKI, A. 1046
RUGG, C.D. 0794, 1370
RUHENSTROTH-NAUER, G. 1241
RUNEEANU, L. 1312
RUNDFELDT, H. 1001
RUTHERFORD, E.R. 0518
RUTTLE, J.L. 0248
RYSANEK, M. 1282

S

SAACKE, R.G. 0042, 0068, 0081, 0084, 0085, 0086,
0087, 0095, 0249, 0250, 0251, 0332, 0333, 0334,
0568, 0613, 0614, 1154, 1481
SADHU, D.P. 0839
SAIRAN, M.R. 0898

SALISBURY, G.W. 0088, 0089, 0090, 0140, 0141, 0142,
 0252, 0273, 0294, 0372, 0437, 0461, 0615, 0616,
 0617, 0618, 0619, 0620, 0656, 0671, 0795, 0833,
 0834, 0835, 0836, 0877, 0935, 1095, 1096, 1134,
 1155, 1156, 1171, 1237, 1246, 1247, 1352, 1355,
 1356, 1482, 1483
 SALSBUY, R.L. 0424, 0895
 SAMALA, B.J.R. 0621
 SAMBORSKI, Z. 1313
 SANFILE, V. 0622
 SANTOS, A.E. dos, 0911
 SARKAR, B.C.R. 0429
 SAROFF, J. 0581
 SARTORE, G. 0430
 SAVAGE, A. 0091, 1338
 SAXENA, V.B. 0253, 0623, 0817, 1314, 1329
 SCEERY, E.J. 0248
 SCHAFFENBURG, C.A. 1065
 SCHAFFER, C.S. 1484
 SCHAPER, A. 0335
 SCHEIL, K.H. 1315
 SCHINDLER, H. 0456, 0624, 0796
 SCHLLE, D.J. 1485
 SCHLUTTER, W. 0254, 0938
 SCHMEHL, M.K.L. 0079, 0092, 0195, 0350
 SCHMIDT, D. 0797
 SCHMIDT, K. 0899, 1066, 1157

SCHOLLUM, L.M. 1215, 1316
SCHONS, J.A.B. 0900
SCHRODE, M. 0555
SCHULTZ, A.P. 0745
SCHULTZ, R.D. 1262
SCHULTZE, A.B. 0799, 1158, 1159, 1160
SCHURAMM, R. 0798
SCHWARK, H.J. 0901
SCHWERDTNER, H. 1317
SCOTT, F.S. 1413
SCOTT, J.A. 0958
SCOTT, T.W. 0440, 1161
SEATH, D.M. 0455, 0590, 0593, 0884, 1051
SECIN, F. 0694
SEFERSHAEV, M.A. 1301
SEHR, G. 0625
SEIDEL JUNIOR, G.E. 0308, 0844, 1486
SEKONI, G. 0093
SELINGER, P. 1318
SELINOVA, O.A. 0336
SELLERS, R.F. 1319
SEMKOV, M. 0824
SENEGACNIK, J. 0658
SENGER, P.L. 0073, 0094, 0364, 0800
SENNING, A. 0256
SENZE, A. 1313
SERTEV, M. 0547

SETTERGREN, I. 0337
SEXTON, T.J. 1368
SHANKMAN, S. 0421
SHANNON, P. 0561, 0626, 0627, 0902, 1304, 1320
SHARMA, V.D. 1358
SHAW, I.G. 0054, 0296
SHAW, J.N. 0180
SHEFFEY, B.E. 1263, 1321
SHERMAN, J.K. 0801, 0802, 1395
SHETH, A.R. 1162, 1172
SHIRAYAMA, K. 0725, 0759
SHOLLUM, L.M. 1316
SHOME, P. 1373
SHOW, L.A. 0301
SHUKLA, D.D. 1067
SHVETS, A.D. 0762
SIDHU, N.S. 0287
SILVA, R.G. 0696, 0803
SIMMAMK, W. 0722
SIMMON, G.C. 1322
SIMONETTA, R. 0628
SIMORAG, Z. 0338
SIMS, B.T. 0180SINDJELIC, V. 1046
SINGLETON, E.F. 1322
SIRATSKII, I. 0257

SJOLLEMA, P. 0096
SLIZYNSKA, H. 0097
SLIZYNSKI, B.M. 0097
SMIGIELSKA, J. 0432, 1163, 1165
SMIRNOV, E.D. 0903
SMIRNOV, I.V. 0804, 1460
SMITH, A.V. 0805, 0806, 1068, 1069, 1471
SMITH, F. 0599, 0945
SMITH, J.T. 0629, 0807, 1487
SMITH, P.J. 1308
SMITH, V.R. 0009, 0120, 0285, 0693
SMITHWICK, E.B. 1488
SNOWDON, W.A. 1296
SNYDER, J.W. 1070
SNYDER, R.G. 1003
SOARES; L.C.V. 0271
SOLANO, R. 0752
SOMADE, B. 0098
SOMLEV, B. 1344
'SONNENSCHNEIN, B. 1285
SÖÖS, P. 0946
SOOSALU, O. 0051
SOREL, P. 1323
SOUQUET, J. 1028
SPANGLER, R.E. 0650
SPITZER, R.R. 0771
SPRIYT, J. 0438

SRIVASTAVA, P.N. 1506
STALHEIM, O.H.V. 1324
STALLCOP, O.T. 0630
STAPLES, R.E. 1071
STEC, J. 0553
STECK, F. 1325
STEGER, H. 1157
STEHLER, E. 0631
STEHLIK, Z. 0258
STEINBACK, J. 0259, 0632, 0633
STEKLIK, I. 1492
STEPHAN, E. 0152, 0904
STERBOVA, J. 1260
STEWART, D.L. 0072, 0224, 0260, 0261, 0262, 0514,
0515, 0516, 0556, 0574, 0634, 0635, 0741, 0808,
0809, 0988, 1288
STOENESCU, A. 1312
STOJADINOVIC, V. 1045
STOJANOV, T. 0431
STOLBOV, S.M. 0274, 0636, 0706, 0707
STOLZMAN, M. 0853
STONE, E.J. 1072
STONE, S.L. 0364
STONE, W.H. 1424
STOWER, J. 0637, 0638, 0785
STOYANOV, T. 0639, 0905
STOYANOVA, M. 1050

STOYE, H. 0263
STRAHL, H. 1164
STRAUCH, D. 1289
STRIKWERDA, R. 0099
STROM, B. 0223
STROM, S. 0640, 0810
STRUPCZEWSKA, M. 1468
STRZEZEK, J. 0432, 0433, 0520, 1165
SULLIVAN, J.J. 0264, 0766, 0811, 1166, 1395
SUNAIKIN, A.A. 1326
SUTRA, P. 1327, 1328
SWANNEY, J.M. 0785
SWANSON, E.W. 0265, 0641, 0642, 0748, 0906, 0907,
0908, 1006, 1073, 1489
SWENSSON, T. 0661
SWYER, G.I.M. 0434
SZALAYKO, T. 0582
SZILAGIL, J. 0883, 1456
SZMYD, D. 1337
SZOJANOV, T. 0377
SZULC, L. 0854
SZUMOWSKI, P. 0100, 1028, 1357
SZUMOWSKI, S. 0435
SYKES, J.C. 0643

T

TABARY, M. 0194, 0768
TACKEN, P.H.W. 1490
TALLMAN, K.L. 1230
TAMPION, D. 1074
TAMBLYN, T.M. 0436, 0836
TANABE, T.Y. 0646
TANAKA, R. 0397
TANIGAWA, Y. 1167
TARAO, T. 0759
TERBLAUCHE, S.J. 0266
TERNER, C. 1145
TESAR, A. 1492
TEUNISSEN, G.H.B. 0101, 0102
THACKER, D.L. 0453, 0644
THERET, M. 0267
THIBAUT, C. 1076, 1077
THOMAS, J.W. 0909
THOM-ASSEY, M. 0046, 0194
THOMPSON, B.J. 0962
THOMSON, D.M. 0910
THORAU SCH, K. 0268
THORP, W.T.S. 1185, 1186, 1187
TIEFENBACH, B. 0860
TILLMANN, H. 0103, 0339

TIMIN, K.S. 0104
TKACHEV, I.F. 1078
TOMAN, J. 1309
TOMANARI, I. 1251
TOMAR, N.S. 0645
TOMME, M.F. 1168
TORRYOV, A. 1344
TOSIC, J. 1169
TOURNEUS, J.C. 0194, 0242, 0521, 0964, 1403
TRIMBERGER, G.W. 0340, 1079
TRIPATHI, S.S. 0253, 0601, 0602, 0623, 0817, 1100,
1314, 1329
TRUEBLOOD, M.S. 1170
TRUSCOT, R.B. 1330, 1331
TSEKOVA, E. 0519
TUNCSEY, T. 0377
TUNKL, B. 1332
TURBIN, V.F. 1493
TURMAN, E.J. 0879
TWOMEY, A. 1304, 1320
TYLER, A. 0646
TULER, W.J. 0510, 0693, 1424

U

ULACHOS, C. 0647
ULBRICH, F. 1333

ULLNER, W. 0648, 1494
UNAL, M.B. 0649
UNDERBJERG, G.K.L. 0650
UREBE, H. 0724
UWLAND, J. 0813
UZU, G. 0105

V

VALE, G. 1446
VALE FILHO, V.R. 0106, 0107, 0269, 0270, 0271, 0341,
0342, 0872, 0911, 1080, 1139, 1240, 1495
VALENCIA ZARAZUÁ, M. 0651, 0652
VALERANI, L. 0814
VALERIO, D.A. 0745
VALETTE, P. 0161
VAN DAM, G.C. 0426, 1496
VAN DELLEN, G.A. 1497
VAN DEMARK, N.L. 0272, 0273, 0372, 0437, 0476, 0550,
0577, 0618, 0654, 0656, 0815, 1081, 1082, 1156,
1171, 1353, 1358, 1498
VANDERPLASSCHE, M. 1083
VAN DIETEN, S.W.J. 0655
VANDJUIIN, C. 0108
VANHAECKE, Y. 0768

Z

ZAGORSKI, D. 0547, 1264, 1281
 ZAKHARIEV, Z 0353
 ZAKI, K. 0346, 1091
 ZAREMBA, W. 0912
 ZEITZ, A. 0728
 ZEMBALA, M. 1202
 ZEMJANIS, R. 0281
 ZGORNIAK-NOWOSILSKA, I. 1203
 ZHEKOV, G. 0547, 0905
 ZIBRIN, M. 0116
 ZIELINSKI, W. 0582, 0583
 ZIEMINSKI, R. 0210
 ZITTLE, C.A. 1125, 1126
 ZODER, H.F. 0675, 1001
 ZUDILIN, V.A. 1286, 1287
 ZULETA, M. 0117
 ZVEREVA, A.P. 1507
 ZWANEMBRUG, T.S. 1090, 1307

VAN HERPEN, G. 0426
VAN KOETSVELD, E.E. 0438
VAN RENSBURG, S.J. 0109, 0816, 1499
VAN TIENHOVEN, A. 0656
VAN TONDER, E.M. 1334
VARNEK, J. 1464
VASELINOVIC, S. 1045, 1500
VASQUEZ, I.A. 0195
VEIGA, J.S. 0657
VEIGA SOARES, L.C.O. 0911, 1240
VENEV, S. 1335
VENGUST, M. 0658
VENKATASWANI, V. 0893
VENKOV, T. 0742
VERAIN, A. 1443
VERES, I. 0110
VERMA, M.C. 0817, 1100
VERSACK, W. 0970, 1411
VIANA, W.G. 0284
VINGEL, W.N. 0249
VINSON, W.E. 0249
VISHNEVSKII, V.I. 0762
VISITIN, J.A. 0284
VIVAUCO, W. 0659
VLJET, W.L.V. 0111
VOLCANI, R. 0624, 0660

VOLGINA, V.I. 0274
VOLOSKOVA, A.P. 0439
VOLYANSKII, L. 1293
VOS, W.H. 1499
VUIDEPOT, R. 0046

W

WADADEKAR, K.B. 1162, 1172
WAGENKNECHT, L.V. 0818
WAIDE, Y. 0588
WALES, R.G. 0027, 0440, 0441
WALLACE, J.C. 0441
WALLACE, R.A. 0249
WALTON, A. 0934, 0973, 1002, 1085, 1169, 1173, 1174,
1359
WALTON, J.E. 1274
WARD, G.M. 0895
WARD, R.D. 0424
WARNICK, A.C. 0870
WASS, K. 0661
WATERS, R.E. 0597, 0598, 1086
WATKINS, W.B. 0887
WATSON, J.D. 0321
WATSON, P.A. 0190, 1087
WAUGH, R.K. 0487
WEARDEN, S. 0691

WEETH, H.J. 0275
 WEICHERT, W. 0179
 WEIMANN, A.I. 1088
 WEIR, D.R. 1432
 WEISS, K. 1502
 WEISS, W. 0276
 WEITZE, K.F. 0112, 0442, 0790, 1175, 1176, 1501
 WELLS, M.E. 0113, 0277, 0820, 0879, 1503
 WERMEISTER, A.V.H. 0343
 WETTEMENN, R.P. 0879
 WHITE, I.G. 0440, 0441, 0443, 0444, 0445, 0446, 0662,
 0663, 0664, 0665, 0666, 1161, 1177, 1178, 1179,
 1504
 WHITE, J.M. 0086, 0250, 0568
 WHITE, R.H. 0642
 WIBBELEY, G. 1237
 WICKERSHAM, E.W. 0454
 WIECHERT, W. 0705
 WIERBOWSKI, S. 1337
 WILLIAMS, W.W. 1505
 WHITMORE, H.L. 1336
 WIERZBOWSKI, S. 1292
 WIGGIN, S.H. 1048
 WIGIN, H.B. 0114, 0278, 0667, 0682
 WILCOX, C.J. 0829
 WILLET, E.L. 0142, 0162, 0163, 0252, 0279, 0496,
 0620, 0668, 0669, 0670, 0671, 0709, 0819, 0974,
 1089, 1247

WILLIAMS, G. 0115, 0989
WILLIAMS, L.F. 1300
WILLIAMS, W.W. 1338
WILLMINGTON, J.A. 0280
WILSON, W.R. 0634, 0635
WINCHESTER, C.F. 1112
WILTBANK, J.N. 0186
WOOD, P.D.P. 0945, 1476
WORK, T.S. 0354, 0932
WU, S.H. 0344

Y

YABLONSKI, V.A. 0672
YAMASHITA, S. 0586
YAMATA, S. 0726
YANG, C.H. 1506
YASSEN, A.M. 0673
YATES, W.D.G. 1226
YILMAZ, S. 1340
YOSHIHARA, K. 1167
YOSIFOV, K. 0519
YOTT, G. 0820
YOUNG, D.H. 0847
YOUNG, G.F. 0709
YOUNG, L.G. 1488
YOUNG, S. 0005

ÍNDICE DE ASSUNTO

Acetato

metabolismo 1116

Acetilcolina

esperma 1158

Ácido ascórbico 0645

esperma 0393

metabolismo 1155

Ácido carbonico

diluyente 0631

Ácido cítrico

esperma 0376, 0377, 0379, 0533, 1129

reação 1155

Ácido glutâmico 0014

espermatozôide 1117

Ácido graxo 1161

esperma 0381

Ácido nucleico

esperma 0354

Acrosoma

anormalidade 0102

avaliação 0203

deformação visicular

esterilidade 0038

descongelamento

manutenção 0114

distribuição 0036
manutenção 0001
morfologia 0343
motilidade 0299
retenção 0082, 1402
temperatura
efeito 0724

Actinobacillus seminis

esperma
isolamento 1334

Açúcar

ação protetora 1458
esperma
reanimação 0462
glicerol
diluidor 0649

Adrenalina

esperma 0363

Adenosina trifosfato 0422

Agente microbiano

pseudomona aeruginosa
sensividade 1293

Aglutinação

cabeça com cabeça 0095
esperma 1297
soro 0095

Água

aquecida

descongelamento 0126

do mar

diluyente 0605

Aldolase

espermatozóide

atividade 0384

Alteração infraestrutural

congelamento 0059

Amido

plasma seminal 0350

Amonoácido

degradação 1450

livre

esperma 0354, 0388

plasma seminal 0350

radioativo

espermatozóide

incorporação 1371

seminal

touro 1120

Aminocina

concentração 0448

diluyente 0448

Amorium urate

touro 0007

Amostra diferencial
espermatozóide 0024

Ampola

plástica

congelamento 0122, 0222, 0588, 0703, 0742, 0755,
0766, 1454

avaliação 0213

método 1470

vidro

congelamento 0073, 0213

avaliação 0213

Análise

congelamento 0230

imunofluorescência

touro

sistema reprodutor 1366

quantitativa

anormalidade

espermatozóide 0105

Andrôgeno

proteína ligadora

plasma seminal 1131

Animal

doméstico

fecundação 0941

gota protoplasmática

espermatozóide 0055

laboratório
 experiência 1023
leptospirose 1216
pseudomoniose 1287
reprodução 0849
sensualidade climática 0904
Inseminação 0118, 0171, 0193, 0222, 0234, 0242, 0261,
 0264, 0275, 0322, 0456, 0479, 0499, 0511, 0513, 0514,
 0516, 0547, 0582, 0583, 0616, 0618, 0620, 0628, 0657,
 0692, 0756, 0803, 0818, 0834, 0927, 1002, 1006, 1024,
 1027, 1041, 1044, 1067, 1196, 1199, 1332, 1477.
anticorpo 0362
antelmintico fenbendazole
 efeito 0860
biologia
 aspecto 0938
capacidade
 touro 0153
concepção 0275, 0965
congresso internacional 1090
Corynebact pyogenes 1214
Corynebact renale 1214
espermatozôide
 avaliação 0151

contagem 0158, 0206
estações do ano
efeito 0877
esterilidade 1064
febre aftosa
transmissão 1224
fisiopatologia 0969
horário 0928
investigação 0919
método
comparação 0256
micoplasma 1253
problema 0937
progresso 0959
qualidade
esperma 0275
resultado 0383, 0721, 0964
revisão 1057
rotina 1003
sucesso 0969, 0979
técnica 0960, 0993, 1075
teste 0161, 0993
tratamento 0981
vaca 0197, 1016, 1349, 1460
variação 0990

virologia 1242
heterospermática 0249, 0988
intracervical
 eficiência 0913
intrauterina
 eficiência 0913
Anormalidade
 acrosoma 0102
 espermatozóide 0003, 0014, 0017, 0083, 0091, 0097
 análise quantitativa 0105
 bainha mitacondrial 0107
 bloqueio luminal 0049
 botão 0019, 0022, 0032
 bovino
 raça Hereford 0105
 raça Jersey 0058
espermatozóide
 capacitação 0020
 capuz acrosomal 0084, 0085
 cauda 0012, 0016, 0021, 0062, 0117
 cratera 0031
 cromatina espermática 0070
 febre passageira 0026, 0027
 nova classificação 0017
 peça intermediária 0011, 0026, 0030, 0072, 0078
 pseudo gota 0011, 0018

ultra estruturais 0105

Amphii

longevidade

efeito 1110

motilidade

efeito 1110

Antibiótico

dehidroestreptomicina

concentração 1313

diluyente 0450, 0496, 0499, 0603, 0668

esperma 1271, 1278

espermatozôide 1295

fertilidade

efeito 1182

influência 0670

flora bacteriana

efeito 1294

oxitetraciclina

concentração 1313

Vibrio fetus

efeito 12127

Anticorpos

espermatozôide 1102

Antielmítico fenbendazole

animal

inseminação 0860

Antígeno

diluyente 0486

Aparelho genital

vaca 1007

Aquecimento

pós descongelamento

efeito 0120

Aquinesia

espermatozóide

cabeça 0192

Arginina

espermatozóide

determinação 1432

Arsenito de sódio

esperma 1160

Aspêcto

biológico

estocagem 1355

touro 0254

bioquímico

esperma 0346

econômico

touro 0254

metabólico

esperma 0346

quantitativo

produção 0272

Aspergillus fumigatus

esperma

contaminação 1335

Aspertato

congelamento

influência 0384

ATP

reativação 0436

Auromicina

diluyente 0646

vitalidade

efeito 1291

Avaliação 0077, 0118, 0120, 0121, 0122, 0123, 0124,

0125, 0126, 0127, 0128, 0129, 0130, 0131, 0132,

0133, 0134, 0135, 0136, 0137, 0138, 0139, 0140,

0141, 0142, 0143, 0144, 0145, 0146, 0147, 0148,

0149, 0150, 0151, 0152, 0153, 0154, 0155, 0156,

0157, 0158, 0159, 0160, 0161, 0162, 0163, 0164,

0165, 0166, 0167, 0168, 0169, 0170, 0171, 0172,

0173, 0174, 0175, 0176, 0177, 0178, 0179, 0180,

0181, 0182, 0183, 0184, 0185, 0186, 0187, 0188,

0189, 0190, 0191, 0192, 0193, 0194, 0195, 0196,
0197, 0198, 0199, 0200, 0201, 0202, 0203, 0204,
0205, 0206, 0207, 0208, 0209, 0210, 0211, 0212,
0213, 0214, 0215, 0216, 0217, 0218, 0219, 0220,
0221, 0222, 0223, 0224, 0225, 0226, 0227, 0228,
0229, 0230, 0231, 0232, 0233, 0234, 0235, 0236,
0237, 0238, 0239, 0240, 0241, 0242, 0243, 0244,
0245, 0246, 0247, 0248, 0249, 0250, 0251, 0252,
0253, 0254, 0255, 0256, 0257, 0258, 0259, 0260,
0261, 0262, 0263, 0264, 0265, 0266, 0267, 0268,
0269, 0270, 0271, 0272, 0273, 0274, 0275, 0276,
0277, 0278, 0279, 0280, 0281.

acrosoma 0203

coleta

em série 0232

congelamento 0235

espermatozôide 0169, 1211

método 0149, 0224, 0225, 0260

físico 1406

químico 1406

morfologia 0308

técnica 0184, 0187

Azoto Líquido

esperma

conservação 0546

Azul de biofenol

coloração 0154

Azul de metileno

espermatozóide

descoloração 0118

teste

redução 0273

B

Bactéria

contaminação 1282

esperma 1230, 1246, 1247, 1255

congelamento 1272

diluyente 1228

espermatozóide

controle 1236

metabolismo 1170

fertilidade

efeito 1217

patogênica

esperma

sobrevivência 1277

qualidade

efeito 1246

resistente

estreptomicina 1184

penicilina 1184

sulfalanida 1184

tipo 1302

viva

esperma 1327

Bacteriologia

Compilobacter fetus 1192

Bainha mitacondrial

espermatozôide

anormalidade 0107

BBSP - Proteína básica

biologia 1241

Benzoto de sódio

diluyente 0624

Beta amilase

diluyente 0513

espermatozôide

capacitação 1351

Beta glucoramidade

diluyente 0513

Bezerro

sexo

predeterminação 1372

BHC

esperma

efeito 0830

Bibliografia

diluyente 0485, 0486

Bioestimulante

diluyente 0636

Biologia 0324

espermatozôide 0286

Bioreto

esperma 0440

Bloqueio seminal

espermatozôide

anormalidade 0049

Bluetongue

virus

deteção 1274

Boophilus microplus

espermatozôide

influência 0896

Bos indicus

esperma

diferença 1364

cobertura 0271

comportamento sexual 0911

diagnóstico andrológico 0269

epidídimo

distúrbio 0106

fertilidade 0269, 0270, 0271

índole 0911

manejo

dificuldade 0911

seleção 0270

Bos taurus

cobertura 0269, 0271

comportamento sexual 0911

diagnóstico andrológico 0269

diluição

esperma 0469

epidídimo

distúrbio 0106

fertilidade 0269, 0271, 0272

índole 0911

libido 1091

manejo

dificuldade 0911

Botão

espermatozôide

anormalidade 0019, 0022, 0032

Bovino

auto imunização 0874

ciclo estral 0884

cobertura 0271

comportamento sexual 0911

diagnóstico andrológico 0269

disfunção epididimal 0050, 0051

epidídimo
 distúrbio 0050, 0051, 0106
esperma
 diferença 1364
 diluição 0469
espermatogênese 0880
espermatozóide
 coloração 0185
 formação saculiforme 0006
exótico
 esperma
 acetilcolinesterase 0391
fertilidade 0002, 0008, 0056, 0067, 0080, 0087,
 0099, 0105, 0108, 0269, 0270, 0271, 0272
função endócrina 0879
função sexual 0864
índole 0911
iso-imunização 0874
leite
 esperma 0908
libido 1091
manejo 0910
mestiço
 comportamento sexual 0911
 índole 0911
 manejo
 dificuldade 0911

nutrição 0885, 0903
processo heterospérmico
qualidade 0056
propriedade antigênica 1102
raça
Ayrshire 0003
Europêia 0041
Friesian
espermatozóide epididimal 0321
fertilidade 0954
hipoplasia testicular 0034
Gir
anormalidade 0107
hipoplasia gonadal 0858
Jersey
anormalidade 0058, 0312
congelamento 0817
desintegração 0109
esperma 0817
esterilidade 0053
frutálise 0349
plasma seminal 0839
preservação 0601, 0602, 1314
Hariana
esperma 0396

Hereford

anormalidade 0115

Holandeza

esperma

frutose 0349

espermatozôide 0016

Holstein

atividade sexual 0917

espermatozôide

produção 0844

Holstein

atividade sexual 0917

espermatozôide

produção 0844

fertilidade 0835, 0946

ganho de peso 0835

plasma seminal 0839

produção 0835

sexualidade 0835

subnutrição 0835

Indiana

degeneração testicular 0900

hipoplasia 0900

Nelore

esperma

aspecto físico 0301

espermatozôide 0301

Red Dane 0253

Sahiwal

plasma seminal 0839

Simental

cruzamento 0218

SRB

sexualidade 0821

Swiss

cruzamento 0218

Zebu

esperma 0415

característica 0873

exame andrológico 0196

libido 0401

Bromato de acetiltrimetilamida

diluyente 0560

Búfalo

esperma 0396, 0817

diferença 1364

frutose 0349

febre aftosa 1329

fertilidade 0589

libido 1091

C

Cafeina

estímulo 0436

motilidade 0658

Cajanus sp

diluyente 0570

Cálcio

esperma 0372

Calor anaeróbico

produção 0607, 1101

Campo magnético

espermatozôide

atuação 1469

qualidade

efeito 1428

Candida albicans

micelia 1220

Candida guillier - mondu

porfirina

produção 1328

Cão

espermatozôide

ácido graxo 1161

Capacitação espermática 0008

espermatozôide

anormalidade 0020

Capilar

congelamento

método 1473

envasamento 1473

Caprino

esperma

ácido ascórbico 0393

coleta 0926, 0975

in vitro 1346

Cápsula gelatinosa

esperma 1460

Capuz acrosomal 0068, 0568

congelamento 0087

manutenção 0081

observação 0034

touro

anormalidade 0084

hereditariedade 0084

subfértil

anormalidade 0085

Carboidrato

gordura 1138

oxidação 1138

touro 1120

Carneiro

esperma

coleta 0926, 0975

congelamento 0980

diluição 0545

estocagem 0711

frutose 0940

preservação 0936

espermatozóide

ácido graxo 1161

epididimal

maturação 1150

in vitro 1346

maturação 0075

metabolismo 1177, 1179

reanimação 0689

esterilidade

divisão meiótica 0199

fertilidade 0201

subfertilidade

divisão meiótica 0199

Carrapato

v. Boophilus microplus

Catalase

diluidor 0509

espermatozóide 1171

Catecolamina

espermatozóide 0398, 1171

Cauda

espermatozóide

anormalidade 0012, 0016, 0021, 0062, 0117

implantação excêntrica 0096, 0097

mitocondria

isolamento 1488

plasmalema livre

isolamento 1488

epididimal 0002

artéria vasal

interrupção 0066

coleta 0112

tamanho 0852

CCI

esperma

efeito 0830

Célula

epiteliogerminativa 0103

espermática

congelamento 0113

descongelamento 0113

física do movimento 0426

motilidade 1395

patologia 0077

epitélio 0103

Central de Inseminação 1240, 1259

Brasil

condições 0911

exame 0207

uso 0270

Cepas de micrococcaceae

esperma

diferença 1267

Cervix

espermatozôide

retenção de reserva 0069

secreção anticorpos 1052

Cetilcolinesterase

esperma

bovino

exótico 0391

Raça Indiana 0391

Choque frio 0571

colesterol

concentração 0360

esperma

lipídios 0444

proteção 1375

espermatozôide 0026

ultraestrutura

Choque térmico

espermatozôide 0406

frio

congelamento 0240

Cinética

fertilidade 0108

Cio

sincronização 0242

Citocromo

esperma

metabolismo 1142

Citologia

característica 0296

espermática 0289

interpretação 0289

Citoquímica

glycoleme 0395

Citrato

diluyente 0155, 0494, 0536, 0550

gema

diluidor 0490, 0542, 0544, 0590, 0620, 0640,
0646, 0659

glicose 0544, 0595

sódio

diluyente 0480, 0487, 0529, 0535, 0625, 0641

Sulfalamida

gema

diluidor 0508

Tamponado

diluidor 0490

Cloreto

esperma 0372

Cloramina

pseudomoniose

tratamento 1286

Cloridrato tripheniltetrazolim 0580

Clormicetina

diluyente 0643

Clorpromazina

esperma 1046

Cobre

esperma 0438

Cobertura

Bos indicus 0271

Bos taurus 0271

gado de leite 0241

Coelho

esperma 0666

Coenzimas

esperma

metabolismo 1142

Colesterol

choque frio

concentração 0360

Coleta

água fria 1375

avaliação 0254

eletro bipolar

método 1442

eletroejaculador 0136, 0554, 1439

eletroejaculação 1455

em série

avaliação 0232

espermatozóide

perda 0986

frequência

efeito 0241

método 1379, 1380, 1503

vagina artificial 0136, 1284

técnica 0143, 1486, 1491, 1505

Colinesterase

plasma seminal

efeito 1130

Coloração 0308

eozina 0181, 0265

esperma 0468, 1377

espermatozóide 0185

morto 0217

vivo 0217

método 0150

negrosina 0181, 0265

técnica 0317

Colorímetro Médico de Lange's
esperma

estimação 1362

Campilobacter fetus

bacteriologia 1192

Composição fosfolipídica

esperma 0367

plasma seminal 0367

Concentração 0264

eletrolítica

plasma seminal 0382

sangue 0382

soro 0382

esperma 1363

espermatozôide 0236, 1412, 1429, 1492

exame 0268

Concepção

gado de leite 0275

Índice 0587, 0902, 0985, 1004, 1075, 1425

monta artificial 0928

inseminação artificial 0275

resultado 1452

Conduta

seminal

touro 0119

sexual

mensuração 0125

Congelamento 0082, 0098, 0139, 0143, 0175, 0205,
0208, 0209, 0247, 0261, 0280, 0311, 0369, 0395,
0409, 0501, 0514, 0520, 0534, 0557, 0633, 0682,
0687, 0693, 0708, 0719, 0741, 0749, 0759, 0769,
0787, 0788, 0789, 0801, 0832, 0843, 0889, 0914,
1025, 1312, 1325, 1343, 1368, 1401, 1405, 1444,
1470, 1481, 1507

alteração infraestrutural 0059

ampola

plástica 0122, 0222, 0588, 0703, 0742, 0755,
0766, 1454

avaliação 0213

método 1470

vidro 0073

avaliação 0213

análise 0230

aspartato

influência 0384

avaliação 0144, 0235

capacidade 0153

capilar

método 1473

capuz acrosomal

manutenção 0081, 0087

célula espermática 0113

choque

frio

efeito 0419

térmico 0240

concentrado 0177

estágio 0581

estocagem

efeito 0712

fertilidade 0087, 0123, 0157, 0214, 0243, 0244

a fundo 0233, 0343, 0503, 0510, 0561, 0569, 0661,

0678, 0690, 0704, 0720, 0721, 0728, 0742, 0754,

0761, 0763, 1054, 1066, 1318, 1397, 1410, 1418,

1425, 1457, 1458, 1459

característica 0175

processo oxidativo 0417

técnica 0726

teoria 0804

gameta 0812

gema

adição 0524

grau 0722

hipoproteína

influência 0356

índice 0748, 1495

infertilidade 0155
in vitro
 manutenção 1352
material vivo 1501
método 0496, 0614, 0739, 0747, 0757, 1404, 1493
monosacarídeo
 adição 0524
motilidade
 influência 0139
mudança 0706
nitrogênio líquido 0036, 0432, 0678, 0683, 0762,
 1440
norma 1448
observação 0740
palheta 0001, 0082, 0086, 0094, 0114, 0120, 0122,
 0126, 0170, 0222, 0229, 0278, 0299, 0491, 0614,
 0649, 0651, 0652, 0676, 0678, 0679, 0681, 0682,
 0703, 0713, 0728, 0729, 0730, 0731, 0733, 0742,
 0746, 0750, 0755, 0756, 0761, 0765, 0766, 0772,
 0773, 0776, 0789, 0794, 0797, 0813, 0820, 1396,
 1400, 1435, 1436, 1454
glicerol 0667
 tempo 0667
método 1473
técnica 1390
tipo 0767

perda 1501

PH

 influência 0139

problema 0110, 0707, 1430

qualidade 0127, 0235

rápido 0042, 0731, 0735, 0745

resistência 0246, 0259

técnica 0779, 0798, 1000, 1392, 1452, 1463

temperatura 0642

tempo 0042

tubo plástico minitub 1385

valor fecundante 0178

vapor nitrogênio 0730, 0761, 1399

Conservação

 palheta 1415

 virus 1333

prolongada 1415

temperatura

 ajuste 1416

 efeito 0800

Contagem

 espermatozóide 0193, 0252, 0267, 0279, 0321, 1365,
 1367, 1388

Contaminação

 microbiológica

 esperma 1265

virus
 IBR - IPV 1266
 Rhinotracheitis 1296
Conteúdo luminal
 epidídimo 0049
Controle
 bacteriológico
 esperma 1240
 lavado prepucial 1240
 epidimiológico
 Rhinotracheitis 1262
Contaminação
 bacteriológica
 esperma 1200
 esperma 1318
Corrente elétrica
 fertilidade 1478, 1479
Corynebact pyogenes
 animal
 inseminação artificial 1214
Corynebact renale
 animal
 inseminação artificial 1214
Corynebacterium haemolyticum
 esperma 1308
Corynebacterium pyogenes 0293
 esperma 1249

Corynebacterium renale

prepúcio 1251

Correlação antigênica

espermatozôide 1068

Cortisol

concentração 0848

Cratera

espermatozôide

anormalidade 0031

Creme

diluyente 0121

Creme de leite

diluyente 0460, 0505, 0541, 0544, 0545, 0574, 0595,
0633, 0638

fertilidade 0452, 0453, 0454

Criopreservação 0701

Cromatina espermática

espermatozôide

anormalidade 0070

infertilidade 0070

Cromatografia

espermatozôide 1398

Cromossomo

espermatozôide 1433

Cruzamento

artificial

touro infestado 1296

avaliação 0310

natural

touro infestado 1296

Curtiss Breeding Service 0187

D

Dehidroestreptomicina

Vibrio fetus

controle 1231

Dehidrogenase lactado (LHD)

atividade 0374

esperma 0414

polimorfismo 0374

Densidade

esperma 0169, 0219, 1408

medição 1422

instrumento ótico

medição 1422

Deoxyribonucleoproteína

espermatogênese

mudança 0044

Descoloração

espermatozôide

método 1417

Descongelamento 0170, 0557, 0676, 0682, 0693, 0696,
0717, 0724, 0739, 0741, 0752, 0775, 0777, 0789,
1165, 1166, 1310, 1391, 1402, 1461

acrosoma

manutenção 0094

água

efeito 0126

alteração 0123

atividade metabólica 0811

célula espermática 0113

espermátide (aparelho)

uso 1485

in vivo 1349

método 0614

palheta 0825

perda 0953

procedimento 0772, 0794

75°C 738

temperatura 0699, 0800

influência 0263, 0820

Deteccção

Bluetongue

virus 1274

Rhinotracheitis

virus 1261, 1262

Desidratação

espermatozóide 1471

Desidrogenase lactado

plasma seminal 1176

Desintegração

espermatozóide 0198, 0337

Determinação hemocitométrica

esperma 1363

Diagnóstico andrológico

Bos indicus 0269

Bos taurus 0269

Diahea virus

esperma

excreção 1336

touro

inoculação 1336

Dehidroestreptomicina

concentração 1228

Diluyente 0447, 0448, 0449, 0450, 0451, 0452, 0453,
0454, 0455, 0456, 0457, 0458, 0459, 0460, 0461,
0462, 0463, 0464, 0465, 0466, 0467, 0468, 0469,
0470, 0471, 0472, 0473, 0474, 0475, 0476, 0477,
0478, 0479, 0480, 0481, 0482, 0483, 0484, 0485,
0486, 0487, 0488, 0489, 0490, 0491, 0492, 0493,
0494, 0495, 0496, 0497, 0498, 0499, 0500, 0501,
0502, 0503, 0504, 0505, 0506, 0507, 0508, 0509,
0510, 0511, 0512, 0513, 0514, 0515, 0516, 0517,
0518, 0519, 0520, 0521, 0522, 0523, 0524, 0525,
0526, 0527, 0528, 0529, 0530, 0531, 0532, 0533,

0534, 0535, 0536, 0537, 0538, 0539, 0540, 0541,
0542, 0543, 0544, 0545, 0546, 0547, 0548, 0549,
0550, 0551, 0552, 0553, 0554, 0555, 0556, 0557,
0558, 0559, 0560, 0561, 0562, 0563, 0564, 0565,
0566, 0567, 0568, 0569, 0570, 0571, 0572, 0573,
0574, 0575, 0576, 0577, 0578, 0579, 0580, 0581,
0582, 0583, 0584, 0585, 0586, 0587, 0588, 0589,
0590, 0591, 0592, 0593, 0594, 0595, 0596, 0597,
0598, 0599, 0600, 0601, 0602, 0603, 0604, 0605,
0606, 0607, 0608, 0609, 0610, 0611, 0612, 0613,
0614, 0615, 0616, 0617, 0618, 0619, 0620, 0621,
0622, 0623, 0624, 0625, 0626, 0627, 0628, 0629,
0630, 0631, 0632, 0633, 0634, 0635, 0636, 0637,
0638, 0639, 0640, 0641, 0642, 0643, 0644, 0645,
0646, 0647, 0648, 0649, 0650, 0651, 0652, 0653,
0654, 0655, 0656, 0657, 0658, 0659, 0660, 0661,
0662, 0663, 0664, 0665, 0666, 0667, 0668, 0669,
0670, 0671, 0672, 0673, 0674, 0675, 1050, 1191
ácido carbônico 0631
água do mar 0605
aminocina 0448
antibiótico 0450, 0496, 0499, 0603, 0668, 1310
antigema 0486
auromicina 0643
bactéria 1288
benzoto de sódio 0624
beta amilase 0513

beta glucoramidase 0513
bibliografia
 1965-72 - 0485
 1972-7 - 0486
bioestimulante 0636
Bromato de acetiltrimetilamida 0560
cajanus sp 0570
 de sódio 0480, 0487, 0529, 0535, 0625
clormicetina 0643
creme 0121
 de leite 0460, 0505, 0541, 0544, 0545, 0574,
 0595, 0633, 0638
 aquecimento 0613
DDT
 contaminação 0553
dióxido de carbono 0675
estreptomicina 0451, 0456, 0495, 0528, 0611, 0634,
 0637, 0643, 0655, 1235, 1236
fosfato 0536
frutose 0603, 0656
gema de ovo 0480, 0492, 0509, 0522, 0523, 0529,
 0535, 0539, 0550, 0553, 0574, 0588, 0590, 0591,
 0621, 0628, 0629, 0637, 0641, 0651, 0652, 0672
glicina 0503
glicerol 0454, 0487, 0497, 0531, 0534, 0585, 0595,
 0614, 0638, 0639
porcentagem 0667

glicose 0625, 0656
Hidrocloridrato de renainicina 0630
hidrôlito
 adição 0556
lactose 0515
leite 0452, 0453, 0492, 0494, 0502, 0504, 0575,
 0622, 0647
 bioquímica 0543
 cabra 0562
 coco 0589, 0601, 0623
 fervido 0644
 ovelha 0612
Medicato saliva 0570
mel 0600
Orto tampões 0536
ovo integral 0495
penicilina 0451, 0459, 0495, 0579, 0611, 0643,
 0655, 1235, 1236
polymyxin 1235, 1236
potássio 0662
raio ultravioleta
 efeito 1426
russo 0602, 0623
saís 0643
salicilato de sódio 0624
salina 0461
SCL-7 0604

sobrevivência 0671
sulfalamida 0449, 0451, 0454, 0579, 0610, 1235,
1236
tamponado 0633, 0638, 0673
técnica 1397
tes-nak-tampão 0558
tipo 1310
tris 0489, 0659
Diluição 0177, 0576, 1111, 1229, 1234, 1321, 1385,
1400, 1445, 1470, 1482
citrato 0155
contagem
interrelação 0474
fertilidade
influência 0670
interrelação 0474
grau 0573
Laiciphos 0231
meios 0488
motilidade
interrelação 0474
ótima 0547
problema 0470, 0619
47°C 1386
redução
qualidade 0455
tris 0521

Diluidor 0447, 0448, 0449, 0450, 0451, 0452, 0453,
0454, 0455, 0456, 0457, 0458, 0459, 0460, 0461,
0462, 0463, 0464, 0465, 0466, 0467, 0468, 0469,
0470, 0471, 0472, 0473, 0474, 0475, 0476, 0477,
0478, 0479, 0480, 0481, 0482, 0483, 0484, 0485,
0486, 0487, 0488, 0489, 0490, 0491, 0492, 0493,
0494, 0495, 0496, 0497, 0498, 0499, 0500, 0501,
0502, 0503, 0504, 0505, 0506, 0507, 0508, 0509,
0510, 0511, 0512, 0513, 0514, 0515, 0516, 0517,
0518, 0519, 0520, 0521, 0522, 0523, 0524, 0525,
0526, 0527, 0528, 0529, 0530, 0531, 0532, 0533,
0534, 0535, 0536, 0537, 0538, 0539, 0540, 0541,
0542, 0543, 0544, 0545, 0546, 0547, 0548, 0549,
0550, 0551, 0552, 0553, 0554, 0555, 0556, 0557,
0558, 0559, 0560, 0561, 0562, 0563, 0564, 0565,
0566, 0567, 0568, 0569, 0570, 0571, 0572, 0573,
0574, 0575, 0576, 0577, 0578, 0579, 0580, 0581,
0582, 0583, 0584, 0585, 0586, 0587, 0588, 0589,
0590, 0591, 0592, 0593, 0594, 0595, 0596, 0597,
0598, 0599, 0600, 0601, 0602, 0603, 0604, 0605,
0606, 0607, 0608, 0609, 0610, 0611, 0612, 0613,
0614, 0615, 0616, 0617, 0618, 0619, 0620, 0621,
0622, 0623, 0624, 0625, 0626, 0627, 0628, 0629,
0630, 0631, 0632, 0633, 0634, 0635, 0636, 0637,
0638, 0639, 0640, 0641, 0642, 0643, 0644, 0645,
0646, 0647, 0648, 0649, 0650, 0651, 0652, 0653,
0654, 0655, 0656, 0657, 0658, 0659, 0660, 0661,

0662, 0663, 0664, 0665, 0666, 0667, 0668, 0669,
0670, 0671, 0672, 0673, 0674, 0675, 1392
açúcar
 glicerol 0649
catalase 0509
citrato
 gema 0490, 0542, 0544, 0590, 0620, 0640, 0646,
 0659
 glicose 0544, 0595
 tamponado 0490
sódio
 tamponado 0641
substrato sintético
 gema 0458
sulfalamida
 gema 0508
comparação 0237, 0551, 0597, 0598, 0609, 0648
creme de leite
 glicina *0574
estreptomicina 1183
frutose
 efeito 0552
 tamponado 0637
gema
 glicerol 0490, 0595
 glicina 0640

glicina 0457, 0525, 0555, 0568, 0637, 0646
glicose 0368, 0495, 0549
grau 0616, 0618, 0652
leite
 glicina 0559
lipoproteína 0511, 0516
motilidade
 influência 0139
penicilina 1184
PH
 influência 0139
pressão osmótica 0608, 0807
processamento 0661
proporção 0651
Raffinose
 gema 0639
sulfalamida 1184
TG-N2 0526
tris
 gema 0494
 tamponado 0632
 tamponado 0490, 0507
variedade 0587
vegetal 0570

Dióxido de carbono

diluyente 0675

esperma 1032

resistência

efeito 0246

Disódio EDTA

esperma

efeito 0822

Distúrbio

funcional

epidídimo 0050, 0051

primário

epidídimo 0048

Divisão meiótica

carneiro 0199

estéril 0199

subfértil 0199

touro

estéril 0199

subfértil 0199

DNA

conteúdo 0192

Doença

bovino 1505

Newcastle

virus 1221

Dosagem

esperma 1429

redução 0188

Dose

espermatozóide

contagem 0146

E

Ejaculação 0002, 0400, 0956

frequência 0827, 0842, 1039

produção 0137

quantidade

efeito 1009

Eletro bipolar

coleta

método 1442

Eletroejaculação 0400, 0872, 0940, 1413, 1439, 1480,

coleta 0136, 0911, 0926

método 1455

estímulo 1427

estudo 1442

gado de leite

técnica 1393

Eletroejaculador

tipo 1499

Eletroforese

esperma 1437

espermatozôide 1398

Eletromicroscopia

estudo 0138, 0316

Embalagem

palheta 0695

Endometrite latente

vaca 0362

Envasamento

capilar 1473

palheta 0699, 1473, 1474

técnica 1466

Enzima

coloração 0181, 0265

esperma

metabolismo 1142

espermatozôide 1165, 1175

fosfatase

plasma seminal 0500

plasma seminal

atividade 0382

sangue

atividade 0382

Épidídimo 0033, 0304

Bos indicus

distúrbio 0106

Bos taurus

distúrbio 0106

conteúdo luminal 0049, 0947

distúrbio primário 0048, 0996

espermatozóide

desintegração 0045

maturação 0331

exame

clínico 0051

físico 0051

fisiologia 0029

massagem 0872

Epitélio dos dutos

cateterização 0112

testículo 0013

Epitélio prepucial invertido

bovino 1284

Equilíbrio

tempo 0277

glicérol 0114, 0143

Equino

espermatozóide

coloração 0185

in vitro 1346

Equipamento

esperma 1360, 1361, 1362, 1363, 1364, 1365, 1366,
1367, 1368, 1369, 1370, 1371, 1372, 1373, 1374,

1375, 1376, 1377, 1378, 1379, 1380, 1381, 1382,
1383, 1384, 1385, 1386, 1387, 1388, 1389, 1390,
1391, 1392, 1393, 1394, 1395, 1396, 1397, 1398,
1399, 1400, 1401, 1402, 1403, 1404, 1405, 1406,
1407, 1408, 1409, 1410, 1411, 1412, 1413, 1414,
1415, 1416, 1417, 1418, 1419, 1420, 1421, 1422,
1423, 1424, 1425, 1426, 1427, 1428, 1429, 1430,
1431, 1432, 1433, 1434, 1435, 1436, 1437, 1438,
1439, 1440, 1441, 1442, 1443, 1444, 1445, 1446,
1447, 1448, 1449, 1450, 1451, 1452, 1453, 1454,
1455, 1456, 1457, 1458, 1459, 1460, 1461, 1462,
1463, 1464, 1465, 1466, 1467, 1468, 1469, 1470,
1471, 1472, 1473, 1474, 1475, 1476, 1477, 1478,
1479, 1480, 1481, 1482, 1483, 1484, 1485, 1486,
1487, 1488, 1489, 1490, 1491, 1492, 1493, 1494,
1497, 1496, 1497, 1498, 1499, 1500, 1501, 1502,
1503, 1504, 1505, 1506, 1507.

Escherichia coli

esperma 1195, 1196, 1306

plasma seminal 1315

Espectroscopia

motilidade

avaliação 1387

Esperma 0041, 0104, 0136, 0140, 0169, 0176, 0179,
0211, 0219, 0239, 0254, 0319, 0343, 0345, 0346,
0349, 0352, 0354, 0357, 0361, 0363, 0364, 0365,
0367, 0368, 0372, 0375, 0376, 0377, 0379, 0380,
0381, 0391, 0393, 0396, 0405, 0406, 0412, 0414,
0415, 0428, 0432, 0435, 0438, 0439, 0443, 0445,
0446, 0468, 0469, 0494, 0533, 0666, 0817, 0891,
0908, 0912, 1046, 1047, 1071, 1076, 1111, 1114,
1115, 1118, 1119, 1121, 1129, 1135, 1141, 1142,
1143, 1151, 1158, 1160, 1166, 1168, 1187, 1189,
1197, 1200, 1223, 1230, 1232, 1235, 1236, 1240,
1246, 1247, 1248, 1250, 1255, 1259, 1260, 1264,
1271, 1278, 1285, 1297, 1299, 1302, 1305, 1307,
1309, 1311, 1318, 1327, 1336, 1338, 1347, 1353,
1377, 1381, 1389, 1394, 1404, 1408, 1411, 1424,
1429, 1437, 1445, 1460, 1483, 1489

acetilcolina 1158

acetilcolinesterase 0391

ácido

ascórbico 0393

cítrico 0376, 0377, 0379, 0533, 0900, 1129

reação 1115

graxo 0381

nucleico 0354

adaptação 1507

Actinobacillus seminis 1334

açúcar 0501, 1093
adrenalina 0363
adrenosina trifosfato 0422
aglutinação 0385, 0542, 0672, 1297
amilase 1020
aminoácido
 livre 0354, 0388, 0429, 0885
antibiótico 1278
 efeito 1271
aplicação 1043
arsenito de sódio 1160
aspecto físico 0301
aspecto metabólico 0346
Aspergillus fumigatus
 contaminação 1335
avaliação 0211, 1446
bactéria 1185, 1186, 1187, 1230, 1246, 1247, 1255,
 1284, 1291.
 viva 1327
bacteriologia
 estudo 1322, 1323
benzoato de estradiol 0840
BHC 0830
biologia
 aspecto 1091, 1092

bioreto 0440

Bos indicus

diferença 1364

búfalo

diferença 1364

cálcio 0372

característica 0248, 0424, 0783, 0842, 0865, 0870,
0873, 0882, 0901, 0905, 0912, 0934, 0946, 0957,
1038, 1067, 1073

carneiro

coleta 0926, 0975

congelamento 0980

contagem 0831

diluição 0545

estocagem 0711

frutose 0940

preservação 0936

cápsula gelatinosa 1460

centrifugação 0673

cepas de microcaceae

diferença 1263

choque frio

proteção 1375

cloreto 0372

clorpromazina 1046

cobre 0438
coelho 0666
coleção 0281
coleta 0872, 0911, 0926, 0975, 1049, 1383
 economia 0972
 estímulo elétrico 0975
 massagem pelo reto 1383
 vagina artificial 0911, 1383
coloração 0468, 1377
colorímetro médico de Lange's
 estimação 1362
comércio 0820
componente 1009, 1011
composição 0345, 0346, 0347, 0348, 0349, 0350, 0351,
 0352, 0353, 0354, 0355, 0356, 0357, 0358, 0359,
 0360, 0361, 0362, 0363, 0364, 0365, 0366, 0367,
 0368, 0369, 0370, 0371, 0372, 0373, 0377, 0378,
 0379, 0380, 0381, 0382, 0383, 0384, 0385, 0386,
 0387, 0388, 0389, 0389, 0391, 0392, 0393, 0394,
 0395, 0396, 0397, 0398, 0399, 0400, 0401, 0402,
 0403, 0404, 0405, 0406, 0407, 0407, 0408, 0409,
 0410, 0411, 0412, 0413, 0414, 0415, 0416, 0417,
 0418, 0419, 0420, 0421, 0422, 0423, 0424, 0425,
 0426, 0427, 0428, 0429, 0430, 0431, 0432, 0433,
 0434, 0435, 0436, 0437, 0438, 0439, 0440, 0441,
 0442, 0443, 0444, 0445, 0446.

fosfolipídica 0367
concentração 0092, 0236, 0935, 0945, 0957, 1363
cortisol 0848
creme de leite 0453
eletrolítica 0549
leite 0453
congelamento 0980, 1148, 1163, 1165, 1166, 1181,
1231, 1239, 1254, 1272
bactéria 1272
 contaminação 1200
nitrogênio líquido 1264
 palheta 1245, 1275
 virus 1272
conservação 0196, 0546, 0948, 0962, 0974, 0980,
0982, 0991, 1032, 1034, 1043, 1048, 1055, 1089.
contaminação 1252, 1318, 1335
 Pseudomona aeruginosa 1238
 salpingo ooforite 1252
controle biológico 1240
conversão
 piruvato alanina 1118
conservação
 temperatura muito baixa 0868
constituente 0663
corante 0915

Corynebacterium haemolyticum 1308

Corynebacterium pyogenes 1249

crescimento 0870

cruzamento

 influência 0894

densidade 0169, 0219, 1362, 1408

 medição 1422

depósito 0961

descoloração amarela 1018

deteção 1339

determinação hemocitométrica 1363

Diahea virus

 excreção 1336

diferença 1257, 1364

dilúente 1228

diluição 0545

dióxido de carbono 1032

dosagem 0927, 1429

economia, 0938

efeito 0830

eletroforese 1437

eliminação 1330

endonuclease 1167

enzima

 resistência 0345

equilíbrio 1507

equipamento 1360, 1361, 1362, 1363, 1364, 1365, 1366,
1367, 1368, 1369, 1370, 1371, 1372, 1373, 1374,
1375, 1376, 1377, 1378, 1379, 1380, 1381, 1382,
1383, 1384, 138-, 1386, 1387, 1388, 1389, 1390,
1391, 1392, 1393, 1394, 1395, 1396, 1397, 1398,
1399, 1400, 1401, 1402, 1403, 1404, 1405, 1406,
1407, 1408, 1409, 1410, 1411, 1412, 1413, 1414,
1415, 1416, 1417, 1418, 1419, 1420, 1421, 1422,
1423, 1424, 1425, 1426, 1427, 1428, 1429, 1430,
1431, 1432, 1433, 1434, 1435, 1436, 1437, 1438,
1439, 1440, 1441, 1442, 1443, 1444, 1445, 1446,
1447, 1448, 1449, 1450, 1451, 1452, 1453, 1454,
1455, 1456, 1457, 1458, 1459, 1460, 1461, 1462,
1463, 1464, 1465, 1466, 1467, 1468, 1469, 1470,
1471, 1472, 1473, 1474, 1475, 1476, 1477, 1478,
1479, 1480, 1481, 1482, 1483, 1483, 1485, 1485,
1486, 1487, 1488, 1489, 1490, 1491, 1492, 1493,
1494, 1495, 1496, 1497, 1498, 1499, 1500, 1501,
1502, 1503, 1504, 1505, 1506, 1507.

Escherichia coli 1195, 1196

estação do ano

influência 0894

estocagem 1093
estradiol exógeno 0178, 0977
Estreptococcus beta hemolíticos 1198
estreptomicina 0913, 1047
estrógeno 0423, 0977, 1071
estudo 0182, 0348
 bacteriano 1302
 bioquímico 0348
 celular 0348
 eletroforético 1475
 eletromicroscópio 0138, 0316
 físico 0348
evolução 0983
exame 0176, 0179, 0239, 1010, 1495
experiência 1023
exportação 1028, 1049, 1404
expulsão 0930
fisiologia 0402, 0903, 1154
 exame 1151
flora bacteriana 1276, 1294, 1317
fosfatase
 ácida 0861
 alcalina 0353, 0431, 0861
 valor biológico 1298
fosfato 0445

fósforo 0032, 0864
 inorgânico 0346
 radioativo
 excreção 1381
fresco 1323, 1343
frutólise 0472, 1157
frutose 0349, 0357, 0376, 0377, 0379, 0401, 0404,
 0861, 0900, 0940, 0949, 1091, 1143
 fator que afeta 1092
fungo 1309
gabinete termostático
 exame 1411
gelatinização 0657
gema 1151
germe de trigo
 influência 0104
glicerina
 resistência 0606
glicólise 1187
glucorticóide da adrenal 0967
glutamic oxaloacetic tranminase 0428
gota citoplasmática
 desintegração 0109
guanidina 0445
hemolisina 0413
heterôgeno
 vivo 1345

hereditariedade 0987, 1060
hialuronidase 0392, 0434, 0517, 1113, 1114, 1143,
1164
concentração 1103
tratamento 1182
homem 0666, 0802
homogenização
leite 0452
creme de leite 0452
hormônio 1065
proteína 1171
iluminação 1330
importação 1049, 1084
imunologia 0411
característica 0375
infecção 1299
inoculação 1386
investigação 0133, 0152, 0281
método 0152
in vitro 1345
in vivo 1345
irradiação
influência 0878
isolamento 1280, 1332, 1334, 1340
isonização 1424
kallikein
influência 0882

lipídio

choque frio 0444

manejo 0145

influência 0894

manganês 0438

masuseio 1483

meiose do núcleo 0929

membrana 0929

metabolismo 1111, 1114, 1115, 1118, 1119, 1121,
1129, 1135, 1141, 1142, 1143, 1151, 1166, 1168

aspecto 1091, 1092, 1095

atividade 1096

citocromo 1142

coezima 1142

efeito 1099

enzima 1142

estudo 1099

zinco 1168

metal pesado

conteúdo 1451

método fotoelétrico

avaliação 1446

Microbacterium paratuberculosis

isolamento 1332

micoplasma 1197, 1203, 1232, 1259, 1260, 1261,
1262, 1263, 1264, 1265, 1266, 1267, 1268, 1269

microbiologia 1215, 1223
 exame 1324
microflora 1264, 1301, 1311
microorganismo 1189
micropatologia 1338
microplasma
 iluminação 1330
microscopia
 exame 1453
minitubo 0791
mistura 0973
Miya gawanella bovis
 isolação 1340
motilidade 0856, 0857
natação 1074
niacina
 quantidade 0446
nitrogênio
 imersão 1008
nucleotídeo livre 0354
oxalato glutamato 0442
patologia 1223
peça intermediária 0907
penicilina 1047
 vitalidade 1250
perfil enzimático 0380
peróxido de glutatamina 0364

PH 0352, 0424, 0826, 1152
pigmento amarelo 0446
plasma 0660
potássio 0372
preservação 0902, 0936, 0946, 0949, 0950, 0951
 temperatura ambiente 1100
piridina nucleosídeo 1031
preservação 0936
produção 0418, 0842, 0847, 0852, 0855, 0859, 0878,
 0891, 0892, 0905, 0910, 0917, 0921, 0931, 0949,
 0965, 1037, 1038, 1055, 1058, 1087, 1168.
 ejaculação frequente 0137
produto metabólico 1285
progesterona 1071
propriedade 0191, 0861, 0862, 0863
 biológica 1507
proteção 1375
proteína 0863
Pseudomona aeruginosa 1248, 1307
pureza 1269
qualidade 0136, 0140, 0852, 0854, 0860, 0864, 0879,
 0908, 0944
 bacteriológica 1305
 glicose 0169
 química
 composição, 0345, 0346, 0347, 0348, 0349,
 0350, 0351, 0352, 0353, 0354, 0355, 0356,

0357, 0358, 0359, 0360, 0361, 0362, 0363,
0364, 0365, 0366, 0367, 0368, 0369, 0370,
0371, 0372, 0373, 0374, 0375, 0376, 0377,
0378, 0379, 0380, 0381, 0382, 0383, 0384,
0385, 0386, 0387, 0388, 0389, 0390, 0391,
0392, 0393, 0394, 0395, 0396, 0397, 0398,
0399, 0400, 0401, 0402, 0403, 0404, 0405,
0406, 0407, 0408, 0409, 0410, 0411, 0412,
0413, 0414, 0415, 0416, 0417, 0418, 0419,
0420, 0421, 0422, 0423, 0424, 0425, 0426,
0427, 0428, 0429, 0430, 0431, 0432, 0433,
0434, 0435, 0436, 0437, 0438, 0439, 0440,
0441, 0442, 0443, 0444, 0445, 0446.

quantidade 0169

raça

influência 0897

radiocesium 1394

reação 1155

reanimação 0462

reativação 0569, 0584, 1008

recuperação 1086

reprodução

eficiência 0683

resistência 0866

respiração 0626, 1160

Riboflavina

quantidade 0446

sobrevivência 0867, 0915

bactéria patogênica 1277

micoplasma 1234

sódio 0372

soro

influência 0660

stress ao calor

efeito 0904, 0912

tamponado 0549

técnica 1360, 1361, 1362, 1363, 1364, 1365, 1366,
1367, 1368, 1369, 1370, 1371, 1372, 1373, 1374,
1375, 1376, 1377, 1378, 1379, 1380, 1381, 1382,
1383, 1384, 1385, 1386, 1387, 1388, 1389, 1390,
1391, 1392, 1393, 1394, 1395, 1396, 1397, 1398,
1399, 1400, 1401, 1402, 1403, 1404, 1405, 1406,
1407, 1408, 1409, 1410, 1411, 1412, 1413, 1414,
1415, 1416, 1417, 1418, 1419, 1420, 1421, 1422,
1423, 1424, 1425, 1426, 1427, 1428, 1429, 1430,
1431, 1432, 1433, 1434, 1435, 1436, 1437, 1438,
1439, 1440, 1441, 1442, 1443, 1444, 1445, 1446,
1447, 1448, 1449, 1450, 1451, 1452, 1453, 1454,
1455, 1456, 1457, 1458, 1459, 1460, 1461, 1462,
1463, 1464, 1465, 1466, 1467, 1468, 1469, 1470,
1471, 1472, 1473, 1474, 1475, 1476, 1477, 1478,
1479, 1480, 1481, 1482, 1483, 1484, 1485, 1486,
1487, 1488, 1489, 1490, 1491, 1492, 1493, 1494,
1495, 1496, 1497, 1498, 1499, 1500, 1501, 1502,

1503, 1504, 1505, 1506, 1507
tecnologia 1015, 1360, 1361, 1362, 1363, 1364,
1365, 1366, 1367, 1368, 1369, 1370, 1371, 1372,
1373, 1374, 1375, 1376, 1377, 1378, 1379, 1380,
1381, 1382, 1383, 1384, 1385, 1386, 1387, 1388,
1389, 1390, 1391, 1392, 1393, 1394, 1395, 1396,
1397, 1398, 1399, 1400, 1401, 1402, 1403, 1404,
1405, 1406, 1407, 1408, 1409, 1410, 1411, 1412,
1413, 1414, 1415, 1416, 1417, 1418, 1419, 1420,
1421, 1422, 1423, 1424, 1425, 1426, 1427, 1428,
1429, 1430, 1431, 1432, 1433, 1434, 1435, 1436,
1437, 1438, 1439, 1440, 1441, 1442, 1443, 1444,
1445, 1446, 1447, 1448, 1449, 1450, 1451, 1452,
1453, 1454, 1455, 1456, 1457, 1458, 1459, 1460,
1461, 1462, 1463, 1464, 1465, 1466, 1467, 1468,
1469, 1470, 1471, 1472, 1473, 1474, 1475, 1476,
1477, 1478, 1479, 1480, 1481, 1482, 1483, 1484,
1485, 1486, 1487, 1488, 1489, 1490, 1491, 1492,
1493, 1494, 1495, 1496, 1497, 1498, 1499, 1500,
1501, 1502, 1503, 1504, 1505, 1506, 1507
temperatura 0847, 0956, 1191, 1357
influência 0859
teste
qualidade 0174
testosterona 0423, 0967
tiamina
quantidade 0446

toxicidade
 antibactericida 0666
 metal livre 0665
transporte 0554, 0657, 0854, 0927, 0943, 0948,
 1019, 1076, 1081, 1389, 1445, 1489
 longa distância 0816
 velocidade 1082
tratamento 0981
 detergente 0436
Trichomonas fetus 1283
ultraestrutura 0291, 1194
ureaplasma
 eliminação 1330
uso 0726, 0920
utilização 0957, 1056
variação sazonal 0888, 0908
venda 1084
viabilidade 1083
Vibrio fetus
 detecção 1339
virologia
 característica 1279
vírose 1202
vírus 1188
 isolamento 1280

vitamina

B 0437

C 1029

zanil

ação 0861, 0862, 0863

zinco 0976

Espermátite (aparelho)

descongelamento 1485

Espermatogênese 0971, 0997

Boophilus microplus

influência 0896

cinética 1062

Deoxyribonucleoproteína

mudança atípica 0044

distúrbio 0006, 0314

estudo 0315

etiologia 0023, 0025

investigação citomorfológica 0314

morfologia 0319

redução 0049

temperatura

efeito 0838

Espermatozôide 0003, 0014, 0016, 0026, 0029, 0055,

0083, 0091, 0097, 0105, 0111, 0143, 0146, 0158,

0169, 0185, 0193, 0198, 0211, 0236, 0252, 0267,

0278, 0279, 0282, 0283, 0284, 0285, 0286, 0287,

0288, 0289, 0290, 0291, 0292, 0293, 0294, 0295,
0296, 0297, 0298, 0299, 0300, 0301, 0302, 0303,
0304, 0305, 0306, 0307, 0308, 0309, 0310, 0311,
0312, 0313, 0314, 0315, 0316, 0317, 0318, 0319,
0320, 0321, 0322, 0323, 0324, 0325, 0326, 0327,
0328, 0329, 0330, 0331, 0332, 0333, 0334, 0335,
0336, 0337, 0338, 0339, 0340, 0341, 0342, 0343,
0344, 0369, 0378, 0398, 0406, 0419, 0420, 0421,
0430, 0694, 0996, 1068, 1094, 1102, 1114, 1116,
1123, 1125, 1126, 1127, 1128, 1132, 1135, 1140,
1155, 1158, 1159, 1162, 1165, 1169, 1170, 1171,
1175, 1178, 1187, 1230, 1237, 1295, 1351, 1354,
1368, 1375, 1377, 1388, 1398, 1412, 1420, 1429,
1433, 1440, 1443, 1471, 1472, 1478, 1479, 1492,
1498, 1500.

ácido

 deoxiribonucleico 0043

 glutâmico 1117

 graxo 1161

 acrosina 0694

aderência 0092

agente estimulante 1122

aglutinação 0065, 0095, 1221

albumina serica 1098

alteração 0110, 0369, 1469

aminoácido 0932
 radioativo 1371
análise 1374
animal doméstico
 gota protoplasmática 0055
anormalidade 0003, 0011, 0012, 0014, 0016, 0017,
 0019, 0020, 0021, 0022, 0026, 0030, 0031, 0032,
 0038, 0049, 0055, 0058, 0062, 0070, 0072, 0078,
 0083, 0091, 0093, 0097, 0105, 0107, 0117, 0251,
 0300, 0997
acrosoma 0038
análise quantitativa 0105
bainha mitocondrial 0107
bloqueio luminal 0049
botão 0019, 0022, 0032
bovino 0065, 0156
 raça Hereford 0105
 raça Jersey 0058
capacitação espermática 0020
capuz acrosomal 0084, 0085
cauda 0012, 0016, 0021, 0062, 0117
coleta 0986
cratera 0031
cromatina espermática 0070
DNA 1432
febre aftosa 0026, 0027

morfologia 0323
peça intermediária 0011, 0026, 0030, 0072, 0078
pseudo gota 0011, 0018
ultra estrutural 0105
aldolase 0384
 atividade 0245
antibiótico 1295
anticorpo 1102
aquinesia 0996
arginina
 determinação 1432
atividade 0384
avaliação 0147, 0151, 0169, 0208, 0209, 0211, 0258,
 1449
Beta amilase
 capacitação 1351
biofísica
 consideração 0185
biologia 0286
 investigação 0770
borracha
 toxicidade 0925
bovino 0075, 0156
 raça Nelore 0301
 raça Zabu
 característica física 0297

- característica morfológica 0297
- congelamento 0297
- cabeça 0192, 0291
 - área ótica 0192
 - matéria seca 0192
 - perda 0098
- calor anaeróbico 1101
- campo magnético 1469
- capacidade fecundante 0025
- capacitação 0020, 1098, 1351
- caprino 1346
- capuz acrosomal 0084, 0085
- característica
 - dimensional 0285
 - metabólica 0320
- carboidrato
 - estudo 1138
- carbono 0932
- carneiro 0075, 0790, 1346
 - estocagem 0770
- catalase 1171
- catecolamina 0398
- cauda 0012, 0016, 0021, 0062, 0117
 - aglutinação 0397
 - enrolada 1270

espiralização 0493
implantação excêntrica 0096, 0099
choque
frio 0009, 0027, 0028, 1095
têrmico 0406
citoquímica
estudo 0390
reação 0410
coloração 0185, 1409, 1464, 1502
concentração 1412, 1429, 1492
concepção 0216
congelamento 0037, 1130
conservação 1077
consumo 1341
contagem 0124, 0142, 0171, 0193, 0205, 0206, 0216,
0221, 0243, 0252, 0261, 0267, 0279, 0303, 0321,
0416, 0474, 0475, 0626, 0696, 0708, 0831, 0947,
1017, 1051, 1365, 1367, 1388.
dose 0146
inseminação 0158
interferência de luz 0279
contrôle
bactéria 1236
corpo
variação 0723
correlação antigênica 1068
cratera 0031

criobiologia
 reação 1440
cromatina espermática 0070
cromatografia 1398
cromossoma 1432
descoloração 0118
 azul de metileno 0118
 método 1417
descongelamento 0015, 0082
desidratação 1471
desintegração 0045, 0198
 epidídimo 0045
determinação 1432, 1492
diluidor
 efeito 0702
dosagem 1051
efeito 1237, 1270
eletroforese 1398
embalagem
 efeito 0702
envelhecimento 0088
enzima 0412, 1175
epididimal 0321, 1137
 bovino
 raça Friesian 0321
 glicose 1109
 maturação 1150

metabolismo 1137
 ácido ascórbico 1155
microscopia
 estudo 344
motilidade 0347
preservação 0686
epidídimo
 mudança 0033
equino 1346
estéril 0052
estocagem 1159
estrutura molecular 0378
estudo 0039, 0135, 0343, 0344, 1112
exame 1414
exposição 1420
febre passageira 0026, 0027
fertilidade 0008, 0156, 0158, 0162, 0204, 0241,
 0275, 0835, 0877, 0944, 0966
física 0359
fluido uterino
 capacitação 1351
fonte fluente
 uso 1498
formação saculiforme
 bovino 0006
 suino 0006

furacin
 efeito 1237
gema de ovo 1173
glicerol
 efeito 1270
 exposição 1420
 localização 1467
glicolise 1127
glucose
 consumo 1114
hemocitômetro fotocorímetro
 determinação 1492
hialuronidase 0694, 1128
histoquímica 0185
homem 0758
imobilidade 0047
implantação excêntrica 0096, 0097
imunologia
 muco estral 0383
 sangue 0383
incorporação 0381
infertilidade 0070
influência 0259
interferometria
 massa seca 1432

- in vitro 1346, 1356
 - capacitação 1351
 - envelhecimento 0089
 - sobrevivência 1354, 1359
 - velocidade 1342, 1353
 - viabilidade 1348
- isolamento 0014, 0088
- lanado
 - catabolismo 1119
- ligação acrosomal 0086
- lipídio 0419, 0420
- localização 1467
- luz
 - efeito 0702
- massa seca 1432
- maturação 0075, 0111, 0331, 1089, 1150, 1356
 - epidídimo 0331
 - in vitro 1356
- meia coloração 0024
- meio opaco
 - observação 1498
- membrana fraturada
 - congelamento 0037
- mensuração 1478, 1479

- metabolismo 1123, 1125, 1133, 1134, 1145, 1170,
1177, 1178, 1179
 - anaeróbico 1140
 - congelamento 1148
 - glicerol 1178
 - gramacidim 1125
 - isolamento 1398
 - piruvato 1123, 1145
 - produto 1116
 - sorbitol 1133
 - sulfalamida 1134
- método 1417
 - homocitamétrico
 - avaliação 1487
 - concentração 1487
- microeletroforese 1500
- microestrutura acrosomal
 - alteração 0110
- microscopia
 - contraste
 - avaliação 1449
 - exame 1414
 - fluorescência
 - análise 1374

morfologia 0033, 0090, 0282, 0284, 0285, 0286, 0287,
0288, 0289, 0290, 0291, 0292, 0293, 0294, 0295,
0296, 0297, 0298, 0299, 0300, 0301, 0302, 0303,
0304, 0305, 0306, 0307, 0308, 0309, 0310, 0311,
0312, 0313, 0314, 0315, 0316, 0317, 0318, 0319,
0320, 0321, 0322, 0323, 0324, 0325, 0326, 0327,
0328, 0329, 0330, 0331, 0332, 0333, 0334, 0335,
0336, 0337, 0338, 0339, 0340, 0341, 0342, 0343,
0344, 0912.

mudança 0329, 0339

morto

coloração 0217

deformidade 0057

exame diferencial 0063, 0154, 0165, 0172, 0217,

motilidade 0001, 0120, 0128, 0129

movimento 0305, 0968

normalidade 1432

nova classificação 0217

observação 0313, 1498

oxidação do succinato 1135

oxigênio 0299, 1171

consumo 1158, 1159, 1341

patologia 0295

forma 1414

peça intermediária 0011, 0026, 0030, 0072, 0078

penetração 0923, 0924

penicilina 1237

penoxetol 1237
perda 0896
peróxido de hidrogênio 1165
PH
 influência 0259
piridim
 efeito 1237
potencial intracelular 1030
preservação 0211, 0329
processamento 0098, 0299
propriedade
 antigênica 1068
 biológica 1507
propulsão 0884
prolactina 1162
proteína 0430, 0932
pseudo gota 0011, 0018
puberdade 0917
qualidade 0156
química 0359, 0421
rato 1356
reanimação 0689, 1421
reativação 1471
regulador metabólico 1136
reposição 1051
reprodução 0282, 0917, 0918

reserva

retenção 0079

respiração 0169, 1127, 1147, 1173, 1174, 1462

secagem 0914

sobrevivência 0024, 0111, 0143, 0259, 0278, 1007,
1040, 1072, 1076, 1077, 1134, 1359

amostra diferencial 0024

soro 1099

super aquecimento 1146

temperatura 0847

choque 0076

enzima 1165

testicular

coloração diferencial 1369

contagem 0321

testículo 0319

transporte 1017

ultraestrutura 0325, 0333, 0741

velocidade 1342

viabilidade 0276, 0283, 1128, 1340, 1472

vida livre 1147

vitalidade 1291

vitrificação 1471

vivo 0054, 0063, 0217

coloração 0217

contagem 0231, 0280

exame diferencial 0063, 0154, 0165, 0172, 0217

Esterilidade 0035, 0038, 0052, 0053, 0057, 0064

agente produtor 1064

bovino 0850

Raça Jersey 0053

citologia 0097

deformação vesicular

acrosoma 0038

gene controlador 0036

imunologia 1424

lesão testicular 0071

touro 0030

Estímulo elétrico

esperma

coleta 0975

Estocagem 0177, 0179, 0329, 0369, 0432, 0460, 0548,

0582, 0650, 0676, 0677, 0678, 0679, 0680, 0681,

0682, 0683, 0684, 0685, 0686, 0687, 0688, 0689,

0690, 0691, 0692, 0693, 0694, 0695, 0696, 0697,

0698, 0699, 0700, 0701, 0702, 0703, 0704, 0705,

0706, 0707, 0708, 0709, 0710, 0711, 0712, 0713,

0714, 0715, 0716, 0717, 0718, 0719, 0720, 0721,

0722, 0723, 0724, 0725, 0726, 0727, 0728, 0729,

0730, 0731, 0732, 0733, 0734, 0735, 0736, 0737,

0738, 0739, 0740, 0741, 0742, 0743, 0744, 0745,

0746, 0747, 0748, 0749, 0750, 0751, 0752, 0753,

0754, 0755, 0756, 0757, 0758, 0759, 0760, 0761,

0762, 0763, 0764, 0765, 0766, 0767, 0768, 0769,

0770, 0771, 0772, 0773, 0774, 0775, 0776, 0777,
0778, 0779, 0780, 0781, 0782, 0783, 0784, 0785,
0786, 0787, 0788, 0789, 0790, 0791, 0792, 0793,
0794, 0795, 0796, 0797, 0798, 0799, 0800, 0801,
0802, 0803, 0804, 0805, 0806, 0807, 0808, 0809,
0810, 0811, 0812, 0813, 0814, 0815, 0816, 0817,
0818, 0819, 0820

alternada 0774

baixa temperatura 0692, 0711, 0716, 1268, 1282

biologia

aspecto 1355

196°C 0683

5°C 1288

contínua 0774

fertilidade 0067

atividade 1355

glucose 0814

grânulo 1301

habilidade 0046

in vitro 1355

método 0213

motilidade 0046

influência 0139

nitrogênio líquido 1301

palheta 0277

PH

influência 0139

processo 0770
79°C 1148, 1288
sobrevivência
 esperma 0671
tempo 0277
 influência 0277
 efeito 0811
Estradiol exôgeno 17B
 esperma
 efeito 0977
 plasma sanguíneo
 efeito 0977
Streptococcus beta hemolíticos
 esperma 1198
Estreptomicina
 bactéria resistente 1184
 dilúente 0451, 0456, 0478, 0495, 0528, 0611, 0634,
 0637, 0643, 0655, 1235, 1236
 esperma 1047
 microorganismo 1229
 sobrevivência 1185, 1186
Vibrio fetus
 efeito 1288
 vitalidade 1291
Estrôgeno
 esperma 1071
Estro sincronizado 0945

Estrutura molecular
espermatozôide 0378

Estudo

bacteriano
esperma 1302
celular
esperma 0348
espermatoológico
bovino 0343
físico
esperma 0348

Exame

alto controle 0220
andrológico 0196
central de inseminação artificial 0207
classificação
touro 0234
clínico
epidídimo 0051
concentração 0268
esperma 0176, 0179, 0239
fertilidade 0220
físico
epidídimo 0051
método 0202
prático 0207

microscópico 0121, 0290
diluição em câmara 0148
morfologia 0328
touro 0258
Exportação
esperma 1404
Exercício muscular
esperma 0891

F

Febre aftosa
bovinos
Raça Murrah 1329
vacinação 1270, 1314
stress 1329
virus 1224
cepa 1244
recuperação 1319
sobrevivência 1239
Fecundação 0025, 0188, 0193, 0194, 0221, 0257, 0325,
0392, 0737, 0782, 0939, 0941
ante congelamento 0488
artificial 0939, 0941
biologia 0942
plasma seminal
efeito negativo 0025

pós congelamento 0488

resultado 1386

Fêmea

trato genital 1077, 1083

Fertilidade 0002, 0087, 0099, 0105, 0126, 0132, 0159,
0162, 0180, 0183, 0192, 0228, 0239, 0242, 0250,
0261, 0280, 0287, 0296, 0326, 0332, 0352, 0379,
0449, 0474, 0478, 0480, 0481, 0495, 0507, 0508,
0509, 0511, 0513, 0514, 0516, 0521, 0522, 0532,
0558, 0574, 0579, 0585, 0610, 0611, 0640, 0644,
0668, 0669, 0691, 0699, 0700, 0709, 0715, 0723,
0725, 0753, 0755, 0759, 0761, 0772, 0793, 0794,
0795, 0797, 0816, 0865, 0915, 0933, 0934, 0945,
0947, 0952, 0961, 0962, 0966, 0980, 0981, 0982,
0991, 0992, 1010, 1014, 1017, 1020, 1025, 1032,
1036, 1039, 1051, 1053, 1071, 1088, 1121, 1123,
1157, 1160, 1174, 1198, 1229, 1235, 1248, 1302,
1308, 1317, 1335, 1397, 1401, 1403, 1418, 1419,
1420, 1424, 1439, 1459, 1482

ácido ascórbico 0645

análise 0163

antibiótico 0502, 0670

efeito 0884, 1182

bactéria 1217

baixa 0080, 0174, 0192, 0451, 0882

Bos indicus 0269, 0270, 0271

Bos taurus 0269, 0271, 0472

carneiro 0201
capacidade 1431
cinética 0108
congelamento 0087, 0157, 0214, 0215, 0243, 0244,
0246
corrente elétrica 1478, 1479
creme de leite
efeito 0453, 0460
diluição 0616, 0617, 0670
espermatozôide 0158
estocagem 0067
estreptomicina
efeito 0451
estudo 1035
exame 0220
exercício forçado
efeito 1070
fator que afeta 0233, 0264
gado de leite 0156, 0204, 0231, 0241, 0275, 0835,
1072
glicerol
efeito 0452, 0454
etileno
efeito 0798
glutathione
efeito 0832

hidrocloridato de cisteína 0645

imunologia 1424

interrelação 0348

investigação 1045

leite

efeito 0453

mamífero 0008

massagem da ampola 1401

morfologia

relação 0340

movimento uterino

influência 1033

penicilina

efeito 0451, 0916

plasma seminal

efeito 1346

pós descongelamento 0177

preservação

influência 0799

proteína vegetal

efeito 0833

ração paletizada 0853

rebanho 0189

resfriamento 1421

resultado 1358

sobrevivência

comparação 0237, 0489

sulfanilamida

efeito 0451

tempo

efeito 0810

touro 0173, 0201, 0204, 0260

previsão 0262

vaca 0197

velhice

efeito 1048

Fertilizante 1437

estocagem 1355

Filtragem sephadex

qualidade 0195

Física

esperma 0319, 0365, 0435

composição 0365

espermatozôide 0369

alteração 0001, 0002, 0003, 0004, 0005, 0006,
0007, 0008, 0009, 0010, 0011, 0012, 0013,
0014, 0015, 0016, 0017, 0018, 0019, 0020,
0021, 0022, 0023, 0024, 0025, 0026, 0027,
0028, 0029, 0030, 0031, 0032, 0033, 0034,
0035, 0036, 0037, 0038, 0039, 0040, 0041,
0042, 0043, 0044, 0045, 0046, 0047, 0048,
0049, 0050, 0051, 0052, 0053, 0054, 0055,
0056, 0057, 0058, 0059, 0060, 0061, 0062,
0063, 0064, 0065, 0066, 0067, 0068, 0069,

0070, 0071, 0072, 0073, 0074, 0075, 0076,
0077, 0078, 0079, 0080, 0081, 0082, 0083,
0084, 0085, 0086, 0087, 0088, 0089, 0090,
0091, 0092, 0093, 0094, 0095, 0096, 0097,
0098, 0099, 0100, 0101, 0102, 0103, 0104,
0105, 0106, 0107, 0108, 0109, 0110, 0111,
0112, 0113, 0114, 0115, 0116, 0117

bioquímica 0369

vesiculectomia seminal 0386

Fisiologia 0819

Fisioquímica 0411

Fitoglutanina na soja

cauda do espermatozôide

efeito 0397

Fixação 0308

Flora bacteriana

antibiótico

efeito 1294

esperma 1276, 1294, 1312, 1317

prepúcio 1222, 1305

Fluído

seminal

IBR-virus 1225

testicular

composição 0441

uterino

espermatozôide 1351

Fonte fluorescente

espermatozóide 1498

Fosfatase alcalina

bioquímica

propriedade 0520

esperma 0353, 0431

Fosfato

diluyente 0536

esperma 0445

Fósforo

inorgânico

esperma 0346

radioativo

esperma 1381

32

esperma 1347

Fotoelétrico absortímetro

calibragem 1388

Fotomicrografia

exposição 1497

Frutólise

esperma

bovino - Raça Jersey 0349

Frutose 0401, 0404, 0472, 0519, 0564, 0565

bovino

Raça Holandesa 0349

Raça Jersey 0349

búfalo 0349
diluyente 0603, 0656
dosagem 0563
esperma 0376, 0377, 0379, 1143
método
 colorimétrico 0566
 químico 0567
plasma seminal 1143
tamponada
 diluidor 0637
teste 0572
variação 0357

Furacim

espermatozóide 1237

Fungo

esperma 1309
prepucio 1309

G

Gabinete termostático

esperma 1411

Gado

corte
 bibliografia 0963
 desmama 0890
 inseminação artificial 0189

glicina
 diluidor 0640
lipídio 0548
lipoproteína 0512, 0548
motilidade
 efeito 1166
tamponado
 diluidor 0633, 0638, 0673
Germe de trigo
 esperma 0104
Glândula
 touro 0353
Glicerina 0557, 0606
 diluyente 0503
Glicerol
 coloração 0463
 interferência 0581
 diluyente 0454, 0487, 0497, 0531, 0534, 0585, 0595,
 0614, 0638, 0639
 porcentagem 0667
espermatozóide
 efeito 1270
 exposição 1420
 localização 1467
 metabolismo 1178

puberdade 0917

reprodução 0282, 0917, 0918

Galea capitis

descongelamento

garanhão 0015

touro 0015

Gameta

congelamento 0812

Garanhão

Galea capitis

descongelamento 0015

meduza

formação 0010

Gás de argônio 0247

motilidade

influência 0247

Gema de ovo

anticorpo 0522

congelamento

proteção 0591

contaminação

DDT 0553

diluyente 0480, 0492, 0509, 0522, 0523, 0529, 0535,
0539, 0550, 0553, 0574, 0588, 0590, 0591, 0621,
0628, 0629, 0637, 0641, 0651, 0652, 0672

glicerol

diluidor 0490, 0595

nutrição 0870
reprodução 0890

leite

anormalidade 0093
avaliação 0204
característica 1004
esperma 0906
ciclo estral 0884
cobertura artificial 0241
concepção 0275
contribuição 0943
digestibilidade 0834
ejaculação 0950, 0951
eletroejaculação
técnica 1393

esperma

produção
variação 1006

espermatozôide

fertilidade 0156, 0204, 0241, 0275, 0835,
0877, 0944, 0966

qualidade 0156

excitação sexual

produção 0168

motilidade 0231

produção 0125, 0241

etileno

fertilidade 0798

motilidade 0798

fertilidade

efeito 0452

método 0454

motilidade 0452

sobrevivência 0789

tempo

equilíbrio 0114, 0143

Glicina

catabolismo 1119

diluyente 0457, 0525, 0555, 0568, 0637, 0646

radioatividade 1407

sobrevivência

espermatozôide 1354

Glicolise

esperma 1187

espermatozôide 1187

Glicose

diluyente 0368, 0495, 0549

esperma

quantidade 0169

plasma seminal 1109

tempo

equilíbrio 0143

Glicosídeo

- esperma 0368
- quantidade 0169
- plasma seminal 0368

Glucose

- diluyente 0625, 0656
- espermatozôide 1114
- epididimal 1109
- estocagem 0814

Glutamic oxaloacetic transminase

- esperma 0428

Glutathione

- fertilidade
- efeito 0832

Glycolema

- citoquímica 0395

Gota

- citoplasmática
- desaparecimento 0109, 0336
- desintegração 0109
- movimento 0336
- protoplasmática 0055

Gramicidin

- espermatozôide
- metabolismo 1125

Grânulo

- estocagem 1301

Guanidina

esperma 0445

H

Habilidade

estocagem 0046

Hemolíssima

esperma 0413

Hélio líquido

temperatura 0758

Hemoglobina

variação sazonal 0881

Hemocitômetro fotocorímetro

espermatozôide

determinação 1492

Hereditariedade 0828

morfologia 0288

Herpesvirus

técnica

isolamento 1226

Heterógeno

esperma

in vitro 1345

vivo 1345

Hialuronidase 0190

acrosomal

preservação 0039

esperma 0392, 0434, 1149, 1164

tratamento 1382

espermatozôide 0694, 1128

propriedade 1506

purificação 1506

Hidrocloridato de cisteína 0645

Hidrocloridato de renainicina

diluyente 0630

Hidrôlito

diluidor 0556

Hipoplasia testicular

bovino

Raça Friesian 0034

touro 0007

Hipoproteína

congelamento

influência 0356

Histopatologia 0071

Homem

esperma

separação Y e X 1373

IBR - IPV

veja também

Rhinotracheitis

IBR - IPV

virus 1225

contaminação 1266

infecção aguda 1199

ocorrência 1242, 1243

persistência 1201

sobrevivência 1245

transmissão 1325

Imunologia

esperma 0375

esterilidade

estrido 1424

fertilidade

estudo 1424

plasma seminal 1190

Incubação 0424

plasma seminal

influência 0320

Infecção

esperma 1299

prepucio 1299

- profilaxia 1299
- pustular
 - vulvovaginite 1333
- Tricomona fetus 1233
- viral pustular
 - infestação 1188
- Infertilidade 0070, 0078, 0155, 0992, 1052, 1060
 - bovino 0846, 0851
 - genética 1080
- Infestação
 - virus
 - Rhinotracheitis 1321
- Injeção de hormônio 0174
- Inseminação artificial
 - v. animal - inseminação
- Inseminação heterospermática
 - v. animal - inseminação heterospermática
- Inseminação intracervical
 - v. animal - inseminação intracervical
- Inseminação intrauterina
 - v. animal - inseminação intrauterina
- Instrumento ótico
 - densidade 1422
- Integridade 0190, 0512

Interferência da luz

espermatozôide

contagem 0279

Interferometria

espermatozôide

massa seca 1432

Investigação 0281

citomorfológica 0314

In vitro 1341, 1342, 1343, 1344, 1345, 1346, 1347,
1348, 1349, 1350, 1351, 1352, 1353, 1354, 1355,
1356, 1357, 1358, 1359.

congelamento

maturação 1352

espermatozôide

capacitação 1351

caprino 1346

carneiro 1346

equino 1346

maturação 1356

rato 1346

sobrevivência 1359

velocidade 1342

viabilidade 1340

estocagem 1355

Iodato de potássio

esperma

influência 0903

Isolamento

herpesvirus 1226

virus

Paravaccinia 1258

Rhinotracheitis 1218

Isonização

esperma 1424

sangue 1424

K

Kallikrein

motilidade

efeito 1344

Kombepellet

método 0256

L

Laboratório

critério 0214, 0215

técnica 0200

teste 0262

combinado 0163

Lactose

diluyente 0515

esperma 0357

Laparo

esperma 0412

plasma seminal 0412

Lavado prepucial

bactéria

controle 1240

Leptospira pomana

sobrevivência 1216

Leptospirose 1190

patogênica

sobrevivência 1310

sobrevivência 1191

Leite

bioquímica 0543

caprino

diluyente 0562

coco

diluyente 0589, 0601, 0623

diluyente 0452, 0453, 0492, 0494, 0502, 0504, 0575,
0622, 0647

fertilidade 0452, 0453

fervido

diluyente 0644

glicina

diluidor 0559

Leucosis

virus

esperma 1273

Levedura

prepucio 1222

Libido

bovino

Raça Zebu 0401

iodeto de sódio 0537

Liofilização

preservação

método 1468

Lipídio

esperma 0439

espermatozôide 0419, 0420

plasma seminal 0420

Lipoproteína

diluidor 0511, 0516

gema de ovo 0512

Líquido seminal

diagnóstico 1061

fertilidade 0088

fisiologia 1021

identificação 1061

influência 0285

longevidade 1036

Anphil

efeito 1110

M

Mamífero

capacitação espermática 0008

epidídimo

fisiologia 0029

espermatozóide 0029

congelamento 0037

estudo 0309

fertilidade 0008

ovo 0947

Manejo

esperma 0145

Manganês

esperma 0438

Manipulação

técnica 0573

Manuseio

esperma 1483

Massagem local

ejaculação 0871

ereção 0871

indução 0871

pelo reto
esperma
coleta 1383

Matéria seca
cabeça
espermatozôide 0192

Maturação
espermatozôide
carneiro 0075
in vitro 1356
touro 0075

Medicato saliva
diluyente 0570

Meduza
formação
garranhão 0010
touro 0010, 0013

Meia colocação
espermatozôide 0024

Meio opaco
espermatozôide
observação 1498

Mel
diluyente 0600

Membrana bacteriana
plasma seminal 1257

Mensuração

- conduta sexual 0125
- espermatozóide 1478, 1479
- método 0245, 0273
- motilidade 1359, 1496

Metabolismo

- anaeróbico
 - espermatozóide 1140
- esperma 1111, 1114, 1115, 1118, 1119, 1121, 1129, 1135, 1141, 1142, 1143, 1151, 1166, 1168
 - estudo isotópico 1113
- espermatozóide 1094, 1116, 1123, 1125, 1126, 1127, 1132, 1133, 1155, 1162, 1169, 1170, 1178
 - epididimal 1137
- lavagem
 - efeito 1504

Método

- avaliação 0149, 0260
- biológico
 - medida 0161
- coleta 1503
- coloração 0149
- congelamento 1493
- esperma
 - avaliação 1446
 - investigação 0152

físico

avaliação 1406

fotográfico

motilidade

estimativa 1456

mensuração 1476

homocitométrico

espermatozóide

avaliação 1487

concentração 1487

inseminação artificial

comparação 0256

kombipellet

potencial reprodutivo 0256

mensuração 0273

pellet

potencial reprodutivo 0246

químico

avaliação 1406

Micobacterium paratuberculosis

esperma

isolamento 1332

Mycoplasma

animal - inseminação artificial 1253

esperma 1259, 1260

sobrevivência 1254

Microbiologia 1180, 1181, 1182, 1183, 1184, 1185,
1186, 1187, 1188, 1189, 1190, 1191, 1192, 1193,
1194, 1195, 1196, 1197, 1198, 1199, 1200, 1201,
1202, 1203, 1204, 1205, 1206, 1207, 1208, 1209,
1210, 1211, 1212, 1213, 1214, 1215, 1216, 1217,
1218, 1219, 1220, 1221, 1222, 1223, 1224, 1225,
1226, 1227, 1228, 1229, 1230, 1231, 1232, 1233,
1234, 1235, 1236, 1237, 1238, 1239, 1240, 1241,
1242, 1243, 1244, 1245, 1246, 1247, 1248, 1249,
1250, 1251, 1252, 1253, 1254, 1255, 1256, 1257,
1258, 1259, 1260, 1261, 1262, 1263, 1264, 1265,
1266, 1267, 1268, 1259, 1260, 1261, 1262, 1263,
1264, 1265, 1266, 1267, 1268, 1269, 1270, 1271,
1272, 1273, 1274, 1275, 1276, 1277, 1278, 1279,
1280, 1281, 1282, 1283, 1284, 1285, 1286, 1287,
1288, 1289, 1290, 1291, 1292, 1293, 1294, 1295,
1296, 1297, 1298, 1299, 1300, 1301, 1302, 1303,
1304, 1305, 1306, 1307, 1308, 1309, 1310, 1311,
1312, 1313, 1314, 1315, 1316, 1317, 1318, 1319,
1320, 1321, 1322, 1323, 1324, 1325, 1326, 1327,
1328, 1329, 1330, 1331, 1332, 1333, 1334, 1335,
1336, 1337, 1338, 1339, 1340

esperma 1223

Microclima

esperma

característica 0905

- Microeletroforese
 - espermatozôide 1500
- Microestrutura acrosomal
 - espermatozôide
 - alteração 0110
- Microflora
 - esperma 1264, 1311
 - prepucio 1281
- Microorganismo
 - esperma 1189
- Micropatologia
 - esperma 1338
- Microplaca
 - herpesvirus
 - isolamento
- Microplasma
 - esperma 1197, 1232
 - iluminação 1330
 - propriedade sorológica 1203
- Microscopia 0306, 0309
 - achado 0180
 - contraste 0284
 - esperma
 - exame 1453
 - espermatozôide
 - avaliação 1449
 - exame 1414

estudo 0344
fisiologia
 observação 0313
fluorescência
 espermatozôide
 análise 1374
Microscópio eletrônico
 observação 0298
Mitochondria
 cauda
 isolamento 1488
Myagawanelia bovis
 esperma
 isolação 1340
Modelo eletroforético
 plasma seminal 1361
Monta artificial
 Índice
 concepção 0928
Morfologia 0041, 0060, 0596
 acrosoma 0299
 anormalidade 0312
 avaliação 0284, 0308
 epidídimo 0051
 espermatozôide 0282, 0283, 0284, 0285, 0286, 0287,
 0288, 0289, 0290, 0291, 0292, 0293, 0294, 0295,
 0296, 0297, 0298, 0299, 0300, 0301, 0302, 0303,

0304, 0305, 0306, 0307, 0308, 0309, 0310, 0311,
0312, 0313, 0314, 0315, 0316, 0317, 0318, 0319,
0320, 0321, 0322, 0323, 0324, 0325, 0326, 0327,
0328, 0329, 0330, 0331, 0332, 0333, 0334, 0335,
0336, 0337, 0338, 0339, 0340, 0341, 0342, 0343,
0344

exame 0328, 0335, 0336

hereditariedade 0288

influência 0285

Morfopatologia

espermatozóide 0319

Motilidade 0128, 0221, 0231, 0240, 0264, 0414, 0436,
0448, 0454, 0474, 0509, 0512, 0527, 0532, 0584,
0597, 0598, 0644, 0715, 0724, 0759, 0774, 0798,
0811, 0933, 0971, 0973, 1094, 1146, 1169, 1236,
1260, 1396, 1402, 1425

Anphil

efeito 1110

aromático 0857

avaliação quantitativa 0129

cafeína 0658

causa 0347

congelamento

influência 0139

desenvolvimento 1022

diluição

efeito 0481

diluidor
 influência 0139
enzima
 efeito 0857
espectroscopia
 avaliação 1387
espermatozóide
 concentração eletrolítica 0358
 PH 0358
 pressão osmótica 0358
estimativa 0236
estocagem 0046
 influência 0139
gás de argônio
 influência 0247
gelêia real
 efeito 0856
gema de ovo
 efeito 1166
glicerol 1166
 efeito 0481
etileno
 efeito 0798
inibição reversível 1462
inibidor 1127
kallikrein
 efeito 1344

lavagem

efeito 1304

luz

efeito

mensuração 1359, 1496

método fotográfico

estimativa 1456

mensuração 1476

nitrogênio

influência 0247

nutriente

efeito 0886

onda de ultrason

efeito 1443

porcentagem 0886, 1497

pós descongelamento 0649

sedativo

efeito 0886

temperatura

influência 0889

teste termoresistência 0658

velhice

efeito 1048

Muco estral

espermatozôide

imunologia 0383

Muco vaginal

secreção 0365

Myxovirose

esperma

absorção 1297

N

Negrosina

coloração 0154, 0181, 0265

Neomicina

pseudomoniose

tratamento 1286

Niacina

esperma 0446

Nitrogênio

congelamento 0036, 0432, 0678, 0683

líquido

butijão 1438

congelamento 1441

estocagem 1301

motilidade

influência 0247

resistência

efeito 0246

Nucleotídeos livres

esperma 0354

Nutriente

digestibilidade 0834

0

Onda de ultrason

motilidade

efeito 1443

Opacidade 0164

Órgão genital

touro jovem 0005

Orquite

esperma 0361

Orto tampões

diluyente 0536

Ovo

espermatozôide

penetração 0923, 0924

integral

diluyente 0495

Ovulação

intervalo 1079

Oxidação do succinato

espermatozôide 1135

Oxigênio

elevação 0935

espermatozôide 1158, 1159, 1171
consumo 1341
qualidade 0937
Oxiglutamato aminoferase 0384
Oxitetraciclina
antibiótico
concentração 1313
Oxolatoglutamato
esperma 0442

P

Palheta

congelamento 0001, 0082, 0086, 0094, 0114, 0122,
0126, 0170, 0222, 0229, 0278, 0299, 1396
método 1473
técnica 1390
envasamento 1473, 1474
manuseio 0985, 1370

Parâmetro bioquímico

esperma 0389

Paravaccinia

virus

isolamento 1258

Patologia 0040, 0060, 0269

célula espermática 0077

clínica 0324

esperma 1223

forma 1414

espermatozóide 0295

Salpingo ooforite 1253

Peça intermediária

espermatozóide

anormalidade 0011, 0026, 0030, 0072, 0078

estrutura unilateral 0060

Penicilina

antibiótico

concentração 1313

diluyente 0451, 0459, 0495, 0579, 0611, 0643, 0655,

1235, 1236

esperma 1235, 1236

diluidor 1184

espermatozóide

efeito 1237

fertilidade

efeito 0916

sobrevivência

efeito 1187

Vibrio fetus

controle 1231

vitalidade 1291

esperma 1250

Penoxetol

espermatozôide

efeito 1237

Peptídeo hidrolizado

plasma seminal 1220

Perfil enzimático

esperma 0380, 1047

Peróxido de glutatiamina

esperma 0364

Peróxido de hidrogenio

espermatozôide 1169

PH

congelamento 0139

diluidor

influência 0139

esperma 0352

espermatozôide

influência 0259

estocagem

influência 0139

Piruvato

alanina

esperma 1118

espermatozôide

metabolismo 1123, 1145

plasma seminal 1176

Plasma

nuclear

vacuolo 0311

sanguíneo

aminoácido livre 0885

cortisol

concentração 0848

Estradiol exogenio 17B

efeito 0977

hormônio 0408

seminal 0042, 0626, 1304

acrosina 1163

amido 0350

aminoácido livre 0350

atividade 0912

antibacteriana 1320

enzimática 0382

bioquímica 0415

constituente 0355

BBSP - proteína básica 1241

cálcio 0399, 0862

citoquímica

reação 0410

cloro 0862

colinesterase

efeito 1130

componente 0258
composição 1486
 fosfolipídica 0367
concentração 0518
 eletrolítica 0382
Dehidrogenase lactado (LDH) 0374, 1176
enzima 0412, 1097
 fosfatase 0500
Escherechia coli 1315
esteroido terapia 0518
estudo 1153, 1362
fecundação
 efeito negativo 0025
fertilidade
 efeito 1346
folículo estimulante 0845, 0898
fósforo 0862
fructose 1143
gema de ovo 0627
glicose 1109
glicosídeo 0368
imunologia 1190
incubação 1089
 influência 0320
inibidor de gonadotropina 0887
lipídio 0420

magnésio 0862
membrana bacteriana 1257
modelo eletroforético 1361
Peptídeos hidrolizados 1220
piruvato 1176
potássio 0839, 0862
proteína 0399
 antibacteriana 1306
 ligadora 1131
qualidade 0355
química 0371, 0433
RNA - Polimerase
 inibidor 1315
síntese de gangliosídeo 0366
sobrevivência
 efeito 1346
sódio 0839, 0862
uréia 0387

Polimixim

dilúente 1235, 1236
pseudomoniose
 tratamento 1286

Vibrio fetus

 controle 1231

Porfirina

Candida guillier mondu
 produção 1328

Pós congelamento

esperma

reativação 0584

temperatura 0073

Pós descongelamento 0247, 0633

acrosoma

manutenção 0094

aquecimento

efeito 0120

fertilidade 0177

motilidade 0177

Potássio

diluyente 0622

esperma 0372

plasma seminal 0839

Potencial reprodutivo

método

kombipellet 0256

Pellet 0256

Pré esperma

química 0400

Prenhez 0266

Prepúcio

Corynebacterium renale 1251

flora bacteriana 1222, 1305, 1317

fungo 1309

infecção 1299
levedura 1222
microflora 1281
uréia 0387
Preservação 0039, 0211, 0254, 0343, 0554, 0576, 0620,
0621, 0674, 0675, 0685, 0722, 0725, 0727, 0736,
0746, 0753, 0773, 0777, 0778, 0786, 0807, 0819
ácido cítrico 0705
196°C 0700, 0717, 0774, 0776
5°C 0494, 0709, 0718, 0724, 0741
prova do disco eletroforético 0718
condição ótima de osmose 0629
desenvolvimento 1483
269°C 0758
embrião 0778
esperma 0211, 0254, 0343
azoto líquido 0546
espermatozóide 0329
fertilidade
influência 0799
longo tempo 0727, 0781, 0783
mecânica 1447
meio sintético 0771
método 0761
nitrogênio líquido 0810
palheta 0738, 1402, 1457, 1458, 1459

refrigeração mecânica 0714

resultado 0764

76°C 0717

79°C 0462, 0689, 0691, 0708, 0709, 0768, 0774,
0776, 0780, 0782, 0783, 0785, 0793, 0795, 0796

temperatura

alta 0646

ambiente 0196, 0589, 0601, 0654, 0680, 0815,
1358, 1402

baixa 0646, 0686, 0713, 0734, 0743, 0781, 0785,
0792, 0798, 0805, 0806, 0810

efeito 0715, 0749, 0811

refrigerador 0623

tempo

equilíbrio 0723

vapor de nitrogênio 0802

varias temperaturas 0653, 0802

Pressão osmótica 0259

diluidor 0608

esperma 1031

Processo sexual

espermatozóide

contagem 0303

Produção 0257, 1311

análise 0153

aspecto quantitativo 0272

diagrama 1378

gado de leite 0125, 0241
excitação sexual 0168
proteína
 animal 0833
 vegetal 0833
zinco
 efeito 0824
Produto metabólico
 esperma 1285
Progesterona
 esperma 1071
Propriedade antigênica
 espermatozóide 1068
Propriedade biológica
 esperma
 adaptação 1507
 equilíbrio 1507
Prostaglandina
 touro 0978
Prolactina
 espermatozóide 1162
Proteína
 animal
 fertilidade 0833
 produção 0833
 antibacteriana
 plasma seminal 1306

espermatozóide 0430

motilidade 0347

ração 0212

seminal

 bovino 0718

 ovino 0718

soro sanguíneo 1361

vegetal

 fertilidade 0833

 produção 0833

Prova de termoresistência 0208, 0209

Pseudomona aeruginosa

 agente antibacteriano 1293

 esperma 1248, 1307

 contaminação 1238

 virulência

 cepa 1292

Pseudomona pyocyanea

 esperma 1275

Pseudomoniose

 animal doméstico 1287

 cloramina

 tratamento 1286

 neomicina

 tratamento 1286

polymyxin

tratamento 1286

Q

Quadro seminal

touro 0119

Qualidade 0118, 0119, 0120, 0121, 0122, 0123, 0124, 0125, 0126, 0127, 0128, 0129, 0130, 0131, 0132, 0133, 0134, 0135, 0136, 0137, 0138, 0139, 0140, 0141, 0142, 0143, 0144, 0145, 0146, 0147, 0148, 0149, 0150, 0151, 0152, 0153, 0154, 0155, 0156, 0157, 0158, 0159, 0160, 0161, 0162, 0163, 0164, 0165, 0166, 0167, 0168, 0169, 0170, 0171, 0172, 0173, 0174, 0175, 0176, 0177, 0178, 0179, 0180, 0181, 0182, 0183, 0184, 0185, 0186, 0187, 0188, 0189, 0190, 0191, 0192, 0193, 0194, 0195, 0196, 0197, 0198, 0199, 0200, 0201, 0202, 0203, 0204, 0205, 0206, 0207, 0208, 0209, 0210, 0211, 0212, 0213, 0214, 0215, 0216, 0217, 0218, 0219, 0220, 0221, 0222, 0223, 0224, 0225, 0226, 0227, 0228, 0229, 0230, 0231, 0232, 0233, 0234, 0235, 0236, 0237, 0238, 0239, 0240, 0241, 0242, 0243, 0244, 0245, 0246, 0247, 0248, 0249, 0250, 0251, 0252, 0253, 0254, 0255, 0256, 0257, 0258, 0259, 0260, 0261, 0262, 0263, 0264, 0265, 0266, 0267, 0268,

0269, 0270, 0271, 0272, 0273, 0274, 0275, 0276,
0277, 0278, 0279, 0280, 0281, 0289, 0389, 0564,
0572, 0706, 0716, 0757, 0955, 0964, 1012, 1091,
1092, 1152, 1314, 1329, 1336, 1503

bactéria

efeito 1246

bacteriologia

esperma 1305

campo magnético

efeito 0306

congelamento 0127, 0235

critério 0323

diluyente 0635

esperma 0136, 0140

teste 0174

espermatozôide

bovino 0156

redução 0455

stress de calor

influência 0879

teste 0952

touro jovem 0210

vacinação 0893

variação sazonal 0881

Química

esperma

composição 0345, 0346, 0347, 0348, 0349, 0350,

0351, 0352, 0353, 0354, 0355, 0356, 0357,
0358, 0359, 0360, 0361, 0362, 0363, 0364,
0365, 0366, 0367, 0368, 0369, 0370, 0371,
0372, 0373, 0374, 0375, 0376, 0377, 0378,
0379, 0380, 0381, 0382, 0383, 0384, 0385,
0386, 0387, 0388, 0389, 0390, 0391, 0392,
0393, 0394, 0395, 0396, 0397, 0398, 0399,
0400, 0401, 0402, 0403, 0404, 0405, 0406,
0407, 0408, 0409, 0410, 0411, 0412, 0413,
0414, 0415, 0416, 0417, 0418, 0419, 0420,
0421, 0422, 0423, 0424, 0425, 0426, 0427,
0428, 0429, 0430, 0431, 0432, 0433, 0434,
0435, 0436, 0437, 0438, 0439, 0440, 0441,
0442, 0443, 0444, 0445, 0446

espermatozôide 0421

composição 0360

plasma seminal 0371

prê esperma 0396

R

Ração

fungo

influência 0897

mofo

influência 0897

proteína 0212
Thiouracil 0906
Radioatividade
glicina 1407
Radrocesium
esperma 1394
Raffinose gema
diluidor 0639
Raio ultravioleta
diluyente
efeito 1426
Rato
esperma
estocagem 0711
espermatozôide
in vitro 1346
Reação criobiológica
espermatozôide 1440
Reanimação
espermatozôide 1421, 1471
Rebanho
fertilidade 0189
Refractometria
plasma seminal 1376
Regulador metabólico
espermatozôide 1135

Reprodução 0341, 0958, 0974, 0999, 1041
artificial 1026
BVK
efeito 1078
capacidade 0191
eficiência 0174, 1026, 1056, 1079
ejaculação frequente
efeito 0918
fisiologia 0939
congresso internacional 1090
gado de leite 0282
imunologia 0362
natural 1026
patologia
congresso internacional 1090
problema 0416
prova 0186
touro 0294
eficiência 0122
Reserva espermática
vasectomia unilateral 0918
Resfriamento
fertilidade
influência 1421
sobrevivência
efeito 0671

Resistência 0606, 0717, 0734

congelamento 0246, 0259

dióxido de carbono 0246

enzimática

esperma 0345

nitrogênio líquido

efeito 0246

Respiração

espermatozóide 0169

inibição reversível 1462

Rete testis 0002

Rhinotracheitis

veja também

IBR - IPV

Rhinotracheitis

vírus 1180, 1188

conceito 1263

contaminação 1296

controle epidimiológico 1262

detecção 1261, 1262

infecção 1333

infestação 1188, 1321

isolamento 1218

sobrevivência 1219, 1245

Ribinucleose seminal

touro 0408

Riboflavina

esperma 0446

RNA Polimerase

inibidor 1315

Russo

diluyente 0602, 0623

S

Sal

diluyente 0643

Salicilato de sódio

diluyente 0624

Salina

diluyente 0461

Salpingo ooforite

esperma

contaminação 1252

patologia 1253

Sangue

ação do zani 0861, 0862, 0863

atividade enzimática 0382

célula

volume 0881

concentração eletrolítica 0382

enzima 1097

holandes

grau 0274

imunologia

espermatozóide 0383

isonização 1424

proteína 0863

SCL-7

diluyente 0604

Secreção

anticorpos

cervix 1052

útero 1052

muco vaginal 0365

uterina 0286

vesícula seminal 0365

Seleção

Bos indicus 0270

Sexo

bezerro

pré determinação 1372

determinação 1001

excitação 0949

inatividade 0944

Síntese de gangliosídeo

esperma 0366

plasma seminal 0366

testículo 0366

Sistema reprodutor 0433

touro

análise de imunofluorescência 1366

fisiologia 1366

Sobrevivência 0476, 0596, 0642, 0682, 0687, 0690,
0693, 0747, 0789, 0806, 0825, 0973, 1169

catalase 0632

diluyente

efeito 0671

influência 0498

espermatozôide 0111, 0143, 0259, 0278, 1230, 1368,
1420, 1443

estocagem

efeito 0671

influência 0498

estreptomicina

efeito 1185, 1186

fator que afeta 1457, 1458, 1459

fertilidade 0489

glicerol

influência 0577

glicina

efeito 1354

in vitro 0553

espermatozôide 1354

lactenina

efeito 0506

lactoperoxidase
 efeito 0506
leptospirose patogênica 1310
maturidade 0550
penicilina 1487
plasma seminal
 efeito 1346
pós descongelamento 0633
prolongamento 0653
resfriamento
 efeito 0671
 influência 0498
temperatura
 influência 0577
Tricomonas fetus 1233
virus
 Rhinotracheitis 1218, 1245

Sódio

esperma 0372
plasma seminal 0839
soro sanguíneo 0862

Soja

fitoglutinina 0397

Sorbitol

espermatozóide
 metabolismo 1133

Soro

albumina

força iônica 0527

atividade enzimática 0382

concentração eletrolítica 0382

efeito 0167

sanguíneo

cálcio 0862

cloro 0862

fósforo 0862

magnésio 0862

potássio

proteína 1361

sódio 0862

State Institute for Animal Insemination in Wrodaw
0258

subfertilidade

genética 1080

Substrato sintético citrato gema

diluidor 0458

Sulfalamida

diluyente 0449, 0451, 0454, 0579, 0610, 1184, 1235,
1236

espermatozóide

metabolismo 1134

Suíno

espermatozóide

formação saculiforme 0006

T

Técnica

avaliação 0187

campo 0200

coleta 1491

esperma 1360, 1361, 1362, 1363, 1364, 1365, 1366,
1367, 1368, 1369, 1370, 1371, 1372, 1373, 1374,
1375, 1376, 1377, 1378, 1379, 1380, 1381, 1382,
1383, 1384, 1385, 1386, 1387, 1388, 1389, 1390,
1391, 1392, 1393, 1394, 1395, 1396, 1397, 1398,
1399, 1400, 1401, 1402, 1403, 1404, 1405, 1406,
1407, 1408, 1409, 1410, 1411, 1412, 1413, 1414,
1415, 1416, 1417, 1418, 1419, 1420, 1421, 1422,
1423, 1424, 1425, 1426, 1427, 1428, 1429, 1430,
1431, 1432, 1433, 1434, 1435, 1436, 1437, 1438,
1439, 1440, 1441, 1442, 1443, 1444, 1445, 1446,
1447, 1448, 1449, 1450, 1451, 1452, 1453, 1454,
1455, 1456, 1457, 1458, 1459, 1460, 1461, 1462,
1463, 1464, 1465, 1466, 1467, 1468, 1469, 1470,
1471, 1472, 1473, 1474, 1475, 1476, 1477, 1478,
1479, 1480, 1481, 1482, 1483, 1484, 1485, 1486,
1487, 1488, 1489, 1490, 1491, 1492, 1493, 1494,

1495, 1496, 1497, 1498, 1499, 1500, 1501, 1502,
1503, 1504, 1505, 1506, 1507

laboratório 0200

Tecnologia

esperma 1360, 1361, 1362, 1363, 1364, 1365, 1366,
1367, 1368, 1369, 1370, 1371, 1372, 1373, 1374,
1375, 1376, 1377, 1378, 1379, 1380, 1381, 1382,
1383, 1384, 1385, 1386, 1387, 1388, 1389, 1390,
1391, 1392, 1393, 1394, 1395, 1396, 1397, 1398,
1399, 1400, 1401, 1402, 1403, 1404, 1405, 1406,
1407, 1408, 1409, 1410, 1411, 1412, 1413, 1414,
1415, 1416, 1417, 1418, 1419, 1420, 1421, 1422,
1423, 1424, 1425, 1426, 1427, 1428, 1429, 1430,
1431, 1432, 1433, 1434, 1435, 1436, 1437, 1438,
1439, 1440, 1441, 1442, 1443, 1444, 1445, 1446,
1447, 1448, 1449, 1450, 1451, 1452, 1453, 1454,
1455, 1456, 1457, 1458, 1459, 1460, 1461, 1462,
1463, 1464, 1465, 1466, 1467, 1468, 1469, 1470,
1471, 1472, 1473, 1474, 1475, 1476, 1477, 1478,
1479, 1480, 1481, 1482, 1483, 1484, 1485, 1486,
1487, 1488, 1489, 1490, 1491, 1492, 1493, 1494,
1495, 1496, 1497, 1498, 1499, 1500, 1501, 1502,
1503, 1504, 1505, 1506, 1507

Temperatura

ambiente

esperma

conservação 0196

preservação 1350

descongelamento
 influência 0263
muito baixa
 esperma
 sensibilidade 0868

Tempo

 equilíbrio 0277
 estocagem
 influência 0277

Tes-Nak tampão

 diluyente 0558

Teste

 animal - inseminação artificial 0161
 biológico
 diluidor 0582, 0583
 combinado
 laboratório 0163
 utilidade 0159
 laboratório 0163, 0262
 progênie 0270
 redução
 azul de metileno 0273
 stress 0244
 termoresistência 0178, 0343
 motilidade 0658

Testículo

biópsia 0955

característica 0061

desenvolvimento 0901

endonuclease 1167

epitélio dos dutos 0013

espermatozóide

coloração diferencial 1369

processo

degenerativo 0080

inflamatório 0080

síntese de gangliosídeos 0366

touro 0353

Testosterona

in vitro

tratamento 1341

TG-N2

diluyente 0526

Thiouracil

ração

efeito 0906

Tianina

esperma 0446

Tiroxina

espermatozóide 1158

Touro

albino

esperma 0494

aminoácido seminal 1120

Ammonium urate 0007

anormalidade 0251

biosíntese 0408

aspecto

biológico 0254

económico 0254

atuação 0257

capuz acrosomal

anormalidade 0084, 0085

carboidrato 1120

conduta sexual 0119

cruzamento 0287, 0958

desempenho sexual 1012

Diahea virus

inoculação 1336

divisão meiótica 0199

doença 0292, 1505

doente

esperma 1244

eficiência reprodutiva 0122

epidídimo

disfunção 0048

epitêlio prepucial

inversão 1284

esperma

mudança 0361

preservação 0211

espermatozôide

estudo 0135, 0343

testículo 0319

estéril 0101

divisão meiótica 0199

esterilidade 0014, 0030, 0035, 0038

exame 0258

classificação 0234

fecundação 0257

fertilidade 0163, 0173, 0180, 0201, 0224, 0260

previsão 0262

Gálea capitis

descongelamento 0015

glândula 0353

hipoplasia testicular 0007

infertilidade 0043, 0044, 0101

Infestado

cruzamento

artificial 1296

natural 1296

inseminação artificial

capacidade 0153

jovem

esperma 0912

estudo

físico 0394

químico 0394

fenotipo 0883

fertilidade 0853, 0878

genética

correlação 0883

hereditariedade 0883

monta 0895

qualidade 0210

reprodução 0883

testículo 0901

libido 0137

meduza

formação 0010, 0013

normal

esperma 0041

puberdade

característica 0137

quadro seminal 0119

qualidade 0266

reprodutor 0295

testículo 0080

ribunucleose seminal 0408

rústico

esperma

avaliação 0211

característica 0248

espermatozóide 0248

sangue

mudança 0361

parâmetro 0723

sexualidade 0828

sistema reprodutor

fisiologia 1366

subfertil

capuz acrosomal

anormalidade 0085

divisão meiótica 0199

espermatozóide

estudo 0135

subnormal

testículo 0319

teste 1120

irradiação 0304

testículo 0353

vacinado

esperma 1244

vasectomia seminal 0186

vasectomizado

plasma seminal 0887

velho

patologia 0869

virologia 1242, 1243

vitamina E 0971

Transaminase

touro

efeito 1124

Transmissão

IBR - IPV

virus 1325

Transporte

esperma 1076, 1389, 1445, 1489

temperatura 1357

Trato genital

cabra 0968

vaca 0968

Tricomonas fetus 1233

contaminação 1326

esperma 1283

infecção 1233

sobrevivência 1234

transmissão 1233

Tris

diluyente 0489, 0659

gema

diluidor 0494

tamponado
 diluidor 0632
tamponado 0490, 0507
Tuba de falôpio
 esperma
 depósito 0961
Tubo plástico minitub
 congelamento 1385

U

Ureaplasma
 esperma
 eliminação 1330
Útero
 doença 0362
 sécrção anticorpos 1052

V

'Vaca
 alergia 1050
 animal - inseminação artificial 0197, 1016, 1349,
 1460
 eficácia 1269
 aparelho genital 1007

cio 1082
 endometrite latente 0362
 fecundação 0205
 fertilidade 0197
 morte
 embrionária 0089
 fetal 0089
 trato genital 0968, 1081
 útero
 problema 0362
Vacinação
 febre aftosa 1270
 stress 1329
 método australiano 0113
Vagina artificial
 coleta 0136, 0911, 1383
Vapor de nitrogênio
 congelamento 1399
Vegetal
 diluïdor 0570
Velocidade
 espermatozôide
 in vitro 1353
Vesícula seminal
 cálcio 0399
 fluïdo 0571
 inflamação 0361

proteína 0399
secreção 0365, 1132
síndrome
 bovino 0004
 touro jovem 0005
touro 0292
Vesiculectomia seminal
 bioquímica
 influência 0386
 física
 influência 0386
 touro 0186
Vesiculite
 etiologia 1195
Viabilidade
 espermatozóide 1472
Vibrio fetus
 antibiótico
 efeito 1227
 caracterização 1193
 contágio 1182
 cultura 1339
 dehidroestreptomicina 1231
 esperma
 detecção 1339
 estreptomicina
 efeito 1288

- penicilina
 - controle 1231
- polimixim sulfato
 - controle 1231
- transmissão 1182
- Vibriose genital 1181
- Virose
 - esperma
 - isolamento 1280
 - patogenicidade 1202
- Virus
 - aftoso
 - isolamento 1303
 - esperma 1188
 - IBR - IPV
 - infecção aguda 1199, 1333
 - persistência 1201
- Vitalidade 0528
 - aureomicina
 - efeito 1291
 - creme de leite
 - efeito 0460
 - esperma 0141
 - estreptomicina
 - efeito 1291
 - penicilina
 - efeito 1291

Vitrificação

espermatozóide 1471

Vulvovaginite

infecção pustular 1333

infestação 1188

Z

Zinco

esperma

metabolismo 1168

produção

efeito 0824

ÍNDICE GEOGRÁFICO

B

Brasil 0041, 0271, 0880, 0911, 1043, 1448

Bulgaria 0547

C

Cuba 0415

E

Egito 0500

Estados Unidos 1084

G

Guatemala 0455

H

Holanda 1084

I

Israel 1180

M

Milão 1090

N

Nova Zelandia 1215

Nigéria 0391

R

Romênia 0763, 0764

Russia 0623

Tabela nº 1 - TIPOS DE PUBLICAÇÕES E PERCENTAGEM

Periódico	Monografias	Teses	Material não Convencional	Sem imprensa	TOTAL
1257	11	30	201	8	1507
83,41	0,73	2,00	13,33	0,53	100

Tabela nº 2 - Ano de Publicação, nº de Trabalhos e percentagem

1836-51	1952-6	1957-61	1962-6	1967-71	1972-6	1977-81	s. i
284	251	153	146	144	256	254	19
18.85%	16.66%	10.15%	9.68%	9.56%	16.99%	16.85%	1.26%

Tabela nº 3 - Campos de Pesquisas mais Estudados e percentagem

Campo nº 1	Campo nº 2	Campo nº 3	Campo nº 4	Campo nº 5	Campo nº 6
228	163	160	147	144	117
15,13%	10,81%	10,61%	9,75%	9,55%	7,76%

Campo nº 1 - Diluentes e Diluidores; Campo nº 2 - Avaliação e Qualificação do Sêmen; Campo nº 3 - Microbiologia do Sêmen; Campo nº 4 - Técnicas, Equipamentos e Tecnologia do Sêmen; Campo nº 5 - Estocagem do Sêmen e Campo nº 6 - Alterações do Espermatozóide.

Tabela nº 4 - TIPOS DE AUTORIA E PERCENTAGEM

Pessoal	Corporativo	Sem autoria	TOTAL
1499	3	5	1507
99,47	0,20	0,33	100

Tabela nº 5 - NOMES DE AUTORES QUE MAIS PRODUZIRAM TRABALHOS

Nome do autor	Nº de trabalhos	%
ALMIQUIST, J.O.	31	2,05
PICKETT, B.W.	29	1,92
JONDET, R.	25	1,65
MANN, T.	21	1,39
SAACKE, R.G.	18	1,19
VAN DEMARK, N.L.	18	1,19
BERNDTSON, W.E.	17	1,15
STEWART, D.L.	17	1,15
HERMAN, H.A.	16	1,06

TABELA nº 6 - TÍTULOS DE REVISTAS QUE MAIS VEICULARAM O ASSUNTO

Título da revista	Nº de trabalhos	%
JOURNAL OF DAIRY SCIENCE	195	12,93
JOURNAL OF ANIMAL SCIENCE	45	2,98
VETERINARY RECORD	44	2,92
NATURE	37	2,32
JOURNAL REPRODUCTION & FERTILITY	28	1,85
MEDYCINA VETERINARIA	22	1,46
A.I. DIGEST	17	1,13
AMERICAN JOURNAL OF VETERINARY RESEARCH	17	1,13
JOURNAL OF AGRICULTURAL SCIENCE	13	0,86
AUSTRALIAN VETERINARY JOURNAL	10	0,66