

DEVELOPING A GLOBAL SOY BLUEPRINT FOR A SAFE SECURE AND SUSTAINABLE SUPPLY

August 10-15, 2009, Beijing, China



for oral presentations and posters

Hosted by

The Chinese Academy of Agricultural Sciences Crop Science Society of China

Organized by

Institute of Crop Science, Chinese Academy of Agricultural Sciences







X P654. Soybean stem canker (*Diaporthe phaseolorum* var. *caulivora*) in Brazil

L. Costamilan¹, P. Bertagnolli¹, J. Yorinori², A. Almeida³, C. Seixas³, E. Binneck³, M. Araújo³, J. Carbonari⁴
1. Brazilian Enterprise for Agricultural Research (Embrapa), National Wheat Research Unit (Embrapa Trigo), 99001-970 Passo Fundo, RS, Brazil; 2. Tropical Breeding and Genetic Ltda. 86183-600 Cambé, PR; 3. Brazilian Enterprise for Agricultural Research (Embrapa), National Soybean Research Unit (Embrapa Soja), 86001-970 Londrina, PR, Brazil; 4. Brazilian Ministry for Agriculture, Livestock and Food Supply – MAPA, 90010-420 Porto Alegre, RS

leila@cnpt.embrapa.br

A new threat to Brazilian soybean production was observed in 2006, when diseased plants (Glycine max) were found in the municipalities of Passo Fundo and Coxilha, state of Rio Grande do Sul (RS), Brazil, showing withered, brown leaves and light to reddish-brown discoloration and necrosis (canker) of the lower half of the stem. Cultural characteristics in potato dextrose agar showed identical patterns to those described for Diaporthe phaseolorum var. caulivora (Dpc). The rDNA-ITS sequence data from the Brazilian strain CH 40/06 (GenBank accession number EU622854) were compared to homologous sequences from the NCBI GenBank database, and a high similarity with Dpc strains was verified. A phylogenetic reconstruction was performed to compare EU622854 with other related sequences and grouped with Dpc, whose group was highly supported by the bootstrap test (99%). Morphology of the Brazilian specimen was also similar to that described although the ascospores in the Brazilian being slightly narrower than the American original material of Dpc. In field surveys performed in the 2006/07 and 2007/08 crop seasons, Dpc was found in other municipalities in RS: Marau, Pontão, Quatro Irmãos, Lagoa Vermelha, Ibirubá, Carazinho, Não-Me-Toque, Água Santa, Ciríaco, São José do Ouro, Vacaria, and Santo Antônio do Planalto. Grain yield losses due to the disease were estimated in 24, 3% in a field with an average of 37, 7% of symptomatic plants.

Keywords Glycine max, yield losses, detection tests.

P655. Soybean green stem disorder associated to seed pathogens in Santa Fe, Argentina

Rosbaco, R. Pioli, G. Tuttolomondo, M. Romagnoli, V. Bisaro, A. Amelong, R. Martignone Faculty of Agronomy -National University of Rosario. PO Box 14, Zip Code S2125ZAA. Zavalla, Argentina. irerosba@unr.edu.ar

The aim of this study was to evaluate the association between: i) the green stem disorder (GSD) and the seed infection by pathogens; ii) the cultivar reactions and the environment. A field trial was carried out in Zavalla, Argentina (33° 01'S) in the 2007/08 crop growing season. Cultivars (CV) of different Maturity Groups (MG) were sown in a randomized block design (B) with 3 replications. DM 4870 (MG IV), RA 514 (MG V) and A 7321(MG VII) cultivars showed 80 % of GSD. Seeds from symptomatic and symptomless (non GSD) plants of each CV were harvested handly; and 50 seeds of each CV with GSD and non GSD per plot, were incubated on acidulated potato glucose agar, at 26°C during 7 days. Germination (%) and infected seed (IS %) by fungal and/or bacterial pathogens were calculated. The statistical analysis was a multifactor (B;CV;GSD-non GSD). The CV x GSD-non GSD interaction was significant for Germination and IS % variable. A 732 showed 10 %, 40 % GSD in two environments in 2006/07 and 80 % GSD in 2007/08 and IS % was different (p< 0.065) between the first and the third growing season. Germination was also different (p< 0.037) between seeds obtained from GSD or non GSD plants for the same cultivar.

Keywords green stem disorder, seed pathogens, germination, environment, soybean

P656. The effect of the world agricultural supply and demand estimates on soybean, corn and wheat cash

prices determined by the Rosario board of trade in Argentina.

M. G. Nardi, T. D. Davis, O. U. Isengildina-Massa Clemson University, 219 Barre Hall Department of Applied Economics and Statistics Clemson UniversityClemson, SC - 29634USA mnardi@clemson.edu

This study tested the effect of the announcement of the monthly release of the World Agricultural Supply and Demand Estimates from the United States Department of Agriculture on the Rosario Board of Trade daily soybean, corn and wheat cash prices. An event-type methodology appropriately adjusted to commodity markets was used to test the semistrong market hypothesis between November 1991 and March 2009. Despite the fact that on the day of the release no significant reaction was documented to the WASDE announcement for soybean cash prices, a strong positive reaction on the day previous and a strong negative reaction three days after the WASDE announcement were found. In the case of corn cash prices, no significant reaction was document on the day of the release of the WASDE report, but the reaction occurred two days later. Finally, wheat cash prices had the largest effect from the release of the WASDE report, three days earlier, on the day of the report release, and the immediate following day. These results would indicate that WASDE announcement affect the RBOT soybean, com and wheat cash prices unequally and support the semi-strong market efficiency theory.

Keywords market efficiency theory, event-type studies, price change, supply and demand, agricultural commodities

P657. European soybean production and market: current situation and future trends

J. Dayde¹, J. C. Chibarie², F. Labalette³
1. Université de Toulouse, École d'Ingénieurs de Purpan, 75 voie du TOEC, B.P. 57611, 31076 Toulouse, France; 2. GIE des Sélectionneurs desoja, 12 avenue George V, 75008 Paris, France; 3. ONIDOL, 12 avenue George V, 75008 Paris, France, jean.dayde@purpan.fr; jeanclaude.chibarie@free.fr; f.labalette@prolea.com

The European Union (EU) - now including 27 member countries - is still today one of the hugest consumers of soybean in the World. As its production represents less than 0.5% of the world-wide harvest, the EU is clearly dependant on imports from South America and the USA. Since 2000, the deficit in proteins used for animal feeding has never been above 70%. More than 65% of these needs are covered by soybean seed or meal imports. The EU soybean market includes oil and meal productions and consumptions which greatly vary among the different countries. Food uses including concentrates, traditional soy foods and their derivates are increasing but still remain low as compared with competing products. In 2008, the EU soybean producing countries were: Italy and Romania (both countries accounting for 75% of the total EU acreage), France, Hungary and Austria. The soybean acreage is partly dedicated to increasing special markets such as non-GMO certified production for some animal feeding chains and organic farming, or under contract production for the food market with special requirements on seed composition. Taking into account the agricultural policy and price trends, the evolutions of environmental concerns and the global and special demand estimates, the future of the European soybean production and market can reasonably be considered as

Keywords soybean, European Union, production, markets, uses

P658. The safety of market supplies of soybean can be solved in China

P. Z. Tian, Q. Y. Wang
Department of Agronomy, College of Plant Science, Jilin University,
Xi'an Road NO.5333, Changchun, Jinlin, 130062, China
peizhantian@163.com

Soybean supplies exerted a tremendous influence on stabilities of price and supplies of meat, birds, eggs and vegetable oil. China having a