

The genetic base of today's triticale in the world and Brazilian-released triticale genotypes is narrow and should be increased; all recommended triticale cultivars originated from a cooperative program with CIMMYT. At Embrapa Trigo, the triticale-breeding program is focused on obtaining triticale cultivars with specific aim at characteristics for adaptation to local climate and increase in genetic variability.

BRS Minotauro is derived from a cross, made at Embrapa Trigo in the winter of 1991, between the Brazilian hexaploid wheat line PF 89358 (BR 35\*3//BR 14\*2/LARGO) and the Brazilian rye Centeio BR 1, followed by doubling the  $F_1$  plant chromosomes using colchicine to produce the new primary octoploid OCTO 92-3. This octoploid line was crossed with the hexaploid triticale Triticale BR 4 (Beagle/Cinamon/Muskox) in 1995.

Annual selections of individual plants were performed according to the generation in a modified-pedigree method. In 1998, after mass selection, the spring hexaploid line PFT 008 was selected and agronomic evaluation started in 1999. Breeder's seed was increased in 2000 and 2001. In 2002 and 2003, the population was described for 'Distinctness, Uniformity and Stability' according to UPOV and evaluated in field trials under distinct environments.

**BRS Minotauro** yields 3,790 kg/ha of grain on average, 9% above the check cultivars, and showed an outstanding test weight and Hagberg Falling Number. The new triticale cultivar was registered in 2005. BRS Minotauro has a medium-tall stature and medium ear emergence and maturity cycle; is tolerant to soil aluminum toxicity; resistant to leaf rust, stem rust, powdery mildew and lodging; moderately resistant to spot blotch, Septoria leaf blotch, and BYDV; and moderately susceptible to scab and preharvest sprouting.

### ***BRS Serrano – the first Brazilian dual-purpose rye cultivar.***

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Rye has been grown for years in the southern states of Brazil, first introduced in the country by Polish and German immigrants two centuries ago. The cropping area has decreased substantially in the last five decades, but rye still presents important potential in cereal production, mainly as pasture or soil cover and for human food. Our breeding efforts aim at yield improvement (grain and green forage), health, and wide adaptation. **BRS Serrano** is derived from a cross made at Embrapa Trigo during the winter of 1998 between Garcia rye and Bagé rye populations. These populations were selected in a field trial of colonial rye genotypes for agronomic and forage evaluation. After three cycles of open pollination, the population of BRS Serrano was established. The genetic seed multiplication process began in 2000 and continued until 2001. Between 2002 and 2004, the population was described for 'Distinctness, Uniformity and Stability' according to UPOV and evaluated in field trials for dual-purpose (forage and grain production) in seven distinct environments. During this period, BRS Serrano produced 10,700 kg/ha dry matter, 30% greater than the yield of rye BR 1 (check cultivar), and the potential was higher than 120 dt/ha. BRS Serrano is diploid and a spring type, has a high stature, and is medium-late in ear emergence and maturity. BRS Serrano is highly tolerant to soil aluminum toxicity; resistant to leaf rust, powdery mildew, spot blotch, Septoria leaf blotch, and BYDV; moderately resistant to scab and grain shedding; susceptible to stem rust and lodging.