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The national network for the evaluation of soybean cultivars in Argentina

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The National Agricultural Technology Institute (INTA) of Argentina, coordinates the National Network for the Evaluation of Soybean Cultivars (RECSO), since 1980. After 2004 the RECSO is conducted through a Technological Vinculation Convenio signed between INTA and ASA (ASOCIATION OF SEED COMPANIES OF ARGENTINA). The seed-producing companies select every year the soybean cultivars that will be evaluated in around 400 experiments conducted in more than 80 locations spread throughout all soybean productive areas of the country. The locations are grouped in 3 major Regions (North, Central Pampeana and South Pampeana) and 13 Sub-regions (nested within Regions).

The objective of this piece of research is to evaluate yield, agronomic behavior and disease reaction of all commercial cultivars available in the market, in order to recommend their utilization for every region of the soybean production area.

The cultivars are grouped according to their Maturity Group (MG) and sowed in different planting dates in field experiments following a Randomized Complete Block Design, with 3 reps. Plots consist of 4 rows 6 m long; the 2 central rows are harvested. Agronomic and fenological data, as well as disease reactions are recorded for each plot.

An Analysis of Variance (ANOVA) is performed with the results for the variable Yield for each experiment, and for groups of experiments. The contribution of each cultivar and location to the Genotype-Environment (GxE) interaction is estimated by Shukla´s procedure. So far, little GxE interaction has been found within each MG and subregion of production. The characterization concludes in each campaign with the determination of the oil and protein content in the evaluated cultivars.