

ARGENTINE CANOLA

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More research, ...better results

The success that rapeseed achieved in 1998 reflects the great possibilities that this crop has in our country. After several years of research and field testing we are in a position to state that we have finally found the way to obtain high competitive yields from this oilseed. It is apparent that the excellent results were the consequence of two basic topics:

- Agronomic management
- Better genetic materials

1- Agronomic management: We focused in field selection and sowing system, date of sowing, fertilization, Sclerotinia control and harvest.

2- Field selection and sowing system: It is imperative to sow only those soils that show good agronomic fitness and with an excellent capacity to accumulate moisture. This means that it is a priority the accumulation of water during March and April, period of excellent rains in our country. In this way the preceding crop can be sunflower, soybean (early or first planting) or corn. Those soils that may present herbicide residues which can damage the crop are categorically discarded.

In the areas with less rains the system of direct planting which favors the accumulation of water by not removing the soil has proved useful, reaching a good implantation and development of the crop. Due to the great diffusion of this system in Argentina, this year practically more than a half of the areas for sowing will be planted with this system.

To achieve a faster covering of the soil the sowings are performed with spacings that range from 15 to 21cm between rows and the densities vary from 4 to 7 kg/ha depending on the farmer's experience, type of seeder, and also on whether the planting is direct or conventional. Our goal is to reach harvest with a stand from 70 to 100 pl/m².

- Sowing period: The results we obtained answered for the previous works regarding the advantage of autumn sowings (April- May) which left excellent growths and developments and also raised the possibilities to make a better use of the moisture and nutrients available for sowing. When sowing at the sowing period there are practically no problems with the first autumn frosts, a plant with high yield potential is obtained and harvest is reached at an excellent moment, even before wheat.

- Fertilization: The use of a balanced fertilization that provides mainly P, N and S was,

from all the agronomic management, the most influential factor to the final yield. It is advisable to make the applications at the moment of sowing or immediately after it

(N and S). In this way a regular growth and development is achieved in all the stages of the crop and flowering is reached with a strong and vigorous plant.

We still have to work in all that is related to a better understanding of the crop demands and its relationship with the values provided by soil analyses. The sources of fertilizers most used are map (11-51-0), urea and ammonium sulphate.

Sclerotinia: Its presence is important in the west and north west of the Bs. As. province . We have detected fields with attacks that go from 20 - 30% of the plants. Eventhough the use of fungicides based on Carbendazim has not been widespread yet, we have verified its high effectiveness in the prevention of this disease attacks, which added to its low cost (U\$S 8 to 10/litre), turn it into a highly recommended technic.

Harvest: 90% of the fields were harvested in straight- combined, with no chemical dessicants and with a moisture percentage from 11 to 15%. There were no crop losses caused by bad harvest or early shattering of grains, but the modification of certain mechanisms of the machines is essential so as to achieve a faster rhythm of harvest (has/day), specially in fields with high yield (more than 2.5 ton/ha).

2-Genetic materials: The appearance of the composite hybrid named **Mistral** (75% sterile hybrid and 12.5% of 2 pollinators) of long cycle and high yield potential, was an unquestionable success and proved that it is absolutely possible to obtain excellent productions (more than 2.5 ton/ha) even in different areas of the country. All the results of previous tests were given validity to field, which gives the farmer who invests in rapeseed great possibilities of success.

The structure of the crop with **Mistral** is that of a plant of 1.8 mts. of height, vigorous growth and with an exuberant leaf area, gross stem and excellent pod size. It presents an excellent resistance to lodging tested even in fields with more than 100 plants per m² and its stem is very strong resisting even Sclerotinia without breaking.

Its particular characteristic of having a longer cycle to flowering (10 to 15 days) in comparison to other conventional varieties and also the capacity of presenting very long racimes gives great advantage when testing yield components. The number of pods per racime is numerous , which indicates the remarked presence of different pollinator insects in flowering and also an adequate relationship between sterile

plants and the pollinators. This information was taken from fields from 50 to 150 has each with no other rapeseed crop nearby.

Eventhough the crop has 10 to 15 days more to flowering, the harvest is not delayed more than 7 days in comparison with the rest of the materials, and reaches maturity in a uniform way and with the racimes well differentiated from the rest of the plant, this facilitates its harvest with no green material been introduced in the combine.

The oil percentages are above the basis of 43%, which grants the farmer a bonus.

The highest yields are obtained from the central and south central areas of the main Argentine agricultural zone. It remains the task of evaluating the adaptation of these materials to the north , area that differentiates mainly because of its drier winters with higher temperatures .

Conclusion: It seems reasonable to assume that a better understanding of the crop needs, better tools available for specialists and farmers, and also novel creations of genetic materials will drive the crop into the future. The process of the grain after harvest has been managed in a more efficient way than it was in previous years, and we absolutely believe that the more production generated, the more supply and commercial choices found.

The crop showed excellent yields, an interesting response to new technology (fertilizers and fungicides) and begins its incorporation to the normal rotation of agricultural fields.