Cajamar analyzes the role of biostimulants in achieving a healthier and more sustainable agriculture

The role that the biostimulants will play in the coming years in the achievement of a healthier, more competitive and sustainable agriculture has centered the Open House Day celebrated today in the Center of Experiences of Cajamar in Paiporta. Those attending the event have been able to learn more than 200 varieties of fruits and vegetables in which the technicians of the Center are working, visit the farm and be interested in the projects and experiences that are underway, in collaboration with companies and institutions of the agri-food sector .

More than 250 people attended the conference, mostly technicians and members of agricultural cooperatives and agri-food companies, representatives of professional associations and members of the university community, who have been able to see first-hand the results that are being obtained to contribute to the development and modernization of the sector.

This activity of knowledge transfer has counted with the presence of the director of Agrifood Innovation of Cajamar, Roberto García Torrente, and the president of the Cajamar Comunidad

Valenciana Foundation, Santos Fernández.

Use and application of biostimulants

The use and application of biostimulants in agriculture has focused the presentations of the experts invited to the Open Doors Conference, who have agreed that a correct use of some of their applications, such as microorganisms (mostly bacteria) allows to improve absorption of fertilizers, besides protecting the roots of the attack of phytopathogens.

Biostimulants are bioactive substances that act on the physiology of the plant in different ways and in different ways that under certain conditions can improve the vigor of the crop, the yield and quality of the harvest.

The agri-food sector has a growing interest in the use of technological innovations that favor the sustainable use of natural resources. It is necessary to search for strategies that reduce and optimize the use of scarce resources such as water, to ensure the performance and competitiveness of companies, without deterioration of soil fertility.

Biostimulants could play a key role in the development of techniques with fewer uses of chemical synthesis pesticides. An alternative that is increasingly valued by a conscientious society in favor of sustainable agriculture.

New varieties with more flavor

The attendees were able to visit the exhibition of the different varieties of watermelon, pepper, tomato, eggplant, melon, pumpkin, onion, cabbage and cabbage in which they are working. In the case of tomatoes, we are seeking to enhance the flavor, as demanded by consumers, especially in thick tomato, Valencian and pear.

Another line of product that is being investigated are the aromatic and condimentary plants, such

as oregano, thyme, rosemary, parsley, mint, mint, basil, cilantro or dill. The works are being carried out on 29 varieties, developed on different cultivation techniques, such as hydroponics. This type of plants has a growing demand in the market.

In the case of watermelon cultivation, biodegradable mulch plastics are being worked on, which will make it possible to avoid possible contamination by bad agrarian practices, in which plastics are not properly managed. Opaque mulches allow reducing the use of water in agriculture, improve weed management and, in general, the structure of the soil.

All this research work developed by Cajamar is transferred to the sector with knowledge transfer activities that include both training and technical advice. In the first six months of this year, 59 training sessions were given, attended by more than 5,000 participants from different fields (technicians, producers, associations and research centers linked to the agri-food sector).

Range of more sustainable products

Another project in which Cajamar is working is Brioprim, whose main objective is the search for bioactive principles with biostimulant and nematicide capacities to obtain a range of products of natural origin that is more environmentally sustainable.

In addition, progress is being made in the research lines of the TomGem project, focused on the improvement of crops under high temperature conditions. The tomato lines that better withstand heat have already been selected, and the process of genetic improvement has begun, to detect which genes are the ones that make the higher temperatures better tolerated.

Cajamar also participates in the GOInnoland project, which works on the mechanisms of social innovation in the management of communities facing the problem of abandonment and improvement of the competitiveness of the associative entities. This initiative aims to recover and modernize part of the abandoned farms in the Valencian Community, to carry out, as far as possible, the varietal reconversion of the same and adapt their harvest schedules to marketing needs.

Likewise, it collaborates in the Operative Group GOCitrus, which has the objective of generating molecular traces that help the identification and varietal management that will serve as a seed for the future, creating a unit of knowledge around the new technologies of genomics. In this sense, work should be done on the development of a computer application that helps to make decisions about the sector in the choice of the variety, considering its particular characteristics of culture and providing objective and adequate information.

An operating group recently installed Huerta 4.0, with which they intend to study greenhouse structures for the cultivation of local vegetables with a certain value, adapted to the climatic conditions in inland areas of the peninsula. For this, 4.0 technologies will be implemented to

improve sustainability and energy efficiency, as well as for integration in the circular economy, trying to reduce the depopulation of these areas.

Another interesting project developed this year deals with the implantation of vegetable covers in the cultivation of fruit trees that is giving good results for biological control by conservation, soil improvement and biodiversity. Likewise, work is being carried out on nutrition and health that confirm that the choice of types and varieties, as well as the management of crops, is allowed to obtain fruits and vegetables with greater content in the health benefits components.

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