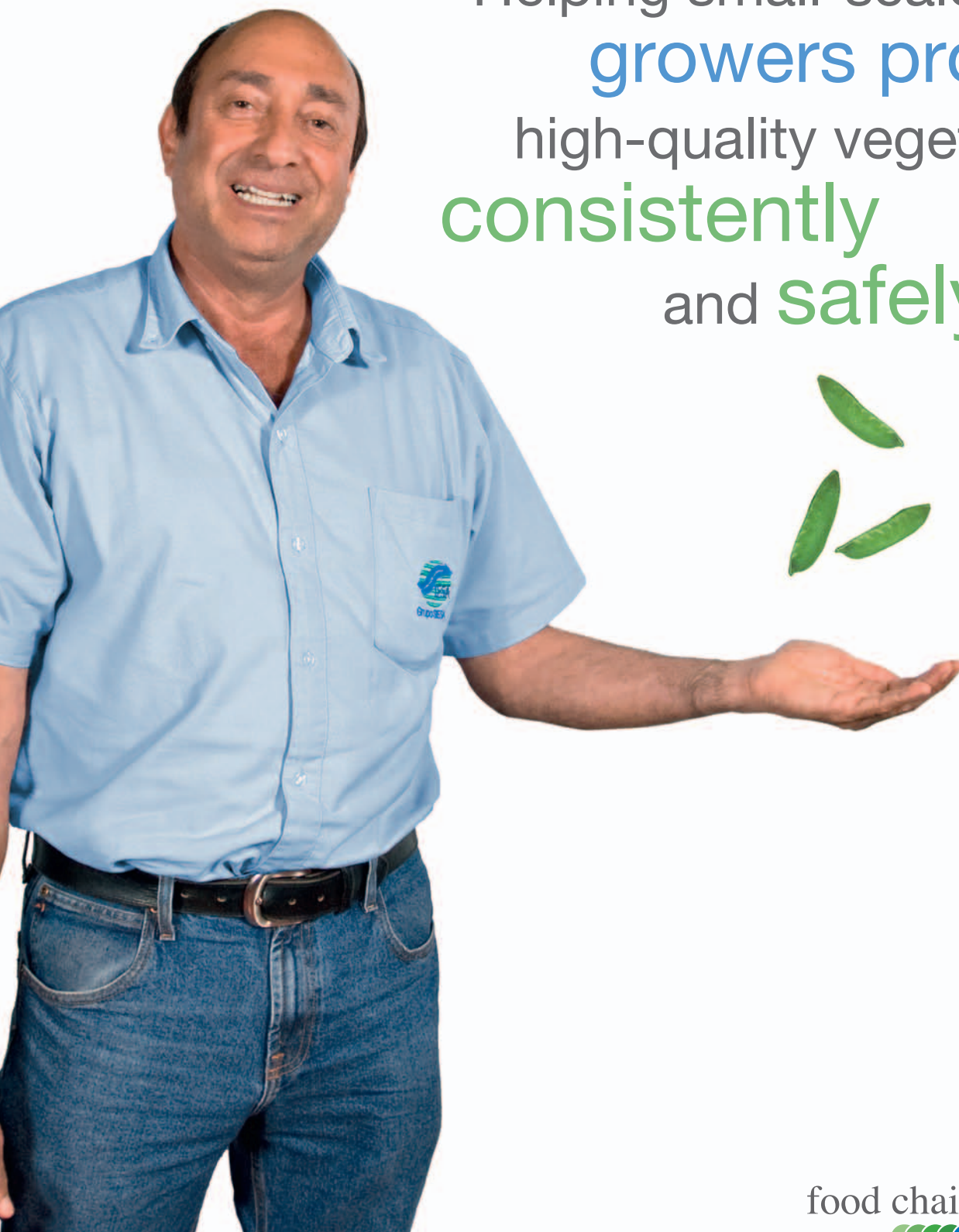




Science For A Better Life

Helping small-scale  
**growers produce**  
high-quality vegetables –  
**consistently**  
and **safely**



food chain partnership



The Guatemalan Vegetable Project

## How it all started

The vegetables grown by SIESA in the highlands of Guatemala include sugar snap peas, hand-shelled peas, runner beans, French beans, mange tout, broad beans, and tender-stem broccoli. Planting takes place from July to March, harvesting from October to June. These vegetables are mainly exported to the UK and USA. The export crops play a key role in the economic development of rural communities in Guatemala.

The markets these vegetables are exported to demand consistently high-quality produce grown in a sustainable way with safe yields and traceability. Many retailers in these countries also demand socially and environmentally responsible farming practices from their suppliers.

A Food Chain Partnership between the SIESA Group and Bayer CropScience was originally signed in 2008, and significantly extended in 2013 due to its success. As Guatemala's export markets were not only increasing in size but also in sophistication, the demand for high-quality and safe produce was also growing. To meet this demand, Guatemalan vegetable farmers and exporters were keen to cultivate their crops by using the latest technology for applying crop protection products and implementing sustainable farming practices in collaboration with Bayer CropScience and SIESA.

## What we aimed to achieve

The main objectives of this Food Chain Partnership project have been:

- High-quality produce
- Sufficient supplies throughout the year
- Safe handling of the vegetables (during planting, harvesting, and transport)
- Compliance with residue standards in the import countries
- Fulfillment of customers' requirements

Meeting customers' requirements in the export markets involves, for example, compliance with specific certification schemes demanded by European retailers and international standards, such as GLOBALG.A.P., HACCP (Hazard Analysis and Critical Control Points), and ETI (Ethical Trading Initiative).





## Who is involved

**SIESA**, Servicios Internacionales de exportación, Sociedad Anónima (SIESA), is one of the main exporters of vegetables to the UK and USA. SIESA has contracts with 17 certified groups of producers and is involved with more than 1,200 small-scale farmers. What drives SIESA's business is the desire to increase consumption of safe, high-quality vegetables in its export markets.

**The vegetable farmer groups** are contracted by SIESA and cultivate their crops on an average of 0.3 hectares with an average production of 7 tons per hectare.

**Bayer CropScience**, with many years of experience and a strong presence in Central America, was the first choice for SIESA to launch the Food Chain Partnership – especially as Bayer shares SIESA's sustainability goals. Bayer's contribution has included a high-quality, effective portfolio of crop protection products and the Agrovida stewardship program, which it runs throughout Central America.

**Agrovida** is a Central America Bayer CropScience stewardship program that aims to train producers in the safe use of crop protection products and environmental care, and also includes good agricultural practices (GAP) to maximize production.



## The integrated solution

Various measures were discussed between SIESA and Bayer CropScience, and finally introduced to achieve the project's goals. Bayer specialists recommended using Decis® to control thrips, and Yunta® and Nativo® to combat soil pest and diseases like Fusarium in an IPM (Integrated Pest Management) program. After demonstrating the advantages of these crop protection products in field trials attended by SIESA farmers and community leaders, all stakeholders agreed to integrate them into the spraying calendar.

During implementation, advice was given on monitoring techniques and ideal application timing. The farmers were helped in learning the best techniques for thrips control by students from the Agronomy Faculty of Universidad de San Carlos de Guatemala.

In addition, training courses were run on the safe use of crop protection products (CPP), monitoring of pests, compliance with standards, such as GLOBALG.A.P., and sustainability measures, such as the safe disposal of empty crop protection containers. During the past few years, an average of 76 training courses have been held annually and more than 1,200 farmers have attended. Last but not least, residue tests were carried out in the demonstration trials, with particular consideration given to the new crop protection products in order to demonstrate that the produce does not exceed the maximum residue levels established in the import country or by the target retailer.





## What we achieved

The concrete results of this Food Chain Partnership project are impressive: an increase in exportable produce of 20%, a reduction in the number of crop protection product applications by around 10%, and reduced contamination from empty product containers. All the project partners have enjoyed clear benefits. The vegetable farmers are producing more exportable produce and achieving higher prices; SIESA is safeguarding its market shares by exporting safe products; and their retailers can promote the high quality and safety of the products to their domestic customers.

However, an equally important outcome of the project, although less easily quantifiable, has been its contribution to the economic development of rural areas in Guatemala by improving household incomes, allowing the families to send their children to schools, providing infrastructural measures and services, and thus preventing rural migration by creating new jobs. In only a few years, these changes in the communities made possible by increased vegetable exports are clearly visible – and most satisfying to the project partners in that country.

## Next steps

The Food Chain Partnership agreement was renewed in 2013 and will be expanded to include around 50 more hectares where vegetables are grown, and another group of producers. This Food Chain Partnership will continue to help small-scale growers in Guatemala to produce high-quality vegetables consistently and safely. And the success of the project up to now indicates that it will carry on playing an important role in the economic development of rural communities in the Guatemalan highlands.



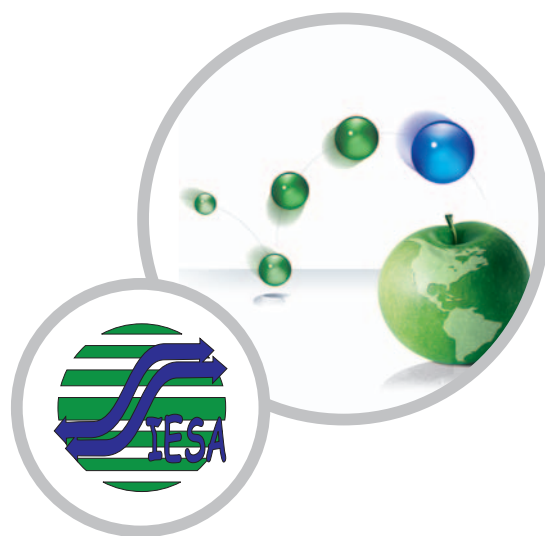
**left:**  
**Juan Carlos González**  
Sales Representative of  
Bayer CropScience Guatemala

**right:**  
**Edgar García**  
Production Manager of SIESA

food chain partnership



Consumers are becoming increasingly conscious of the need for healthy nutrition. Food Chain Partnerships help to supply consumers with high-quality fresh produce, which forms the basis of a healthy diet. But such partnerships can only succeed if they involve every player in the food chain – from the farmer and processor to the exporter or importer and retailer. Bayer CropScience has the global experience and cutting-edge expertise to create a successful partnership at every level.



**Bayer CropScience**

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