AGRICULTURAL CROPS, be they grains, vegetables or fruit, need human intervention to grow strong and healthy. One of the main priorities of every farmer is to protect the harvest. In this mission, agrochemical products play an important role. But knowing what products to apply when and how is no simple matter. From growth regulators to fungicides, pesticides and herbicides, the selection alone can be bewildering. Add to that the fact that one wrong choice can mean the loss of an export contract, and the process becomes truly daunting.

Farmers who produce fruit for export have to comply with a range of different requirements of destination countries and retailers in terms of maximum residue levels (MRLs), pre-harvest intervals (PHIs) and retailer-specific conditions regarding agrochemical use. Producers can also only use registered, legally permitted products that are safe and suitable and comply with the latest regulations.

When producers base their crop protection action on incorrect or outdated information, the financial and market access consequences can be dire.

FIRST STEPS
As far back as 2007, CapeSpan Exports (now CapeSpan South Africa) established a website as part of the Agri Business Systems international (ABS) initiative to meet the demand for a single source of information on agrochemical and other market requirements. It was an electronic communication platform that published information on international fruit export standards and requirements, and allowed producers to reciprocate with proof of their compliance with these standards.

But the need for a streamlined communication system that included a consolidated source of agrochemical information extended to the entire food crop and agrochemical industry. Consequently, CropLife SA, the association that represents manufacturers and suppliers of crop protection products in South Africa, contributed funding to expand the ABS chemical database. It was eventually decided, however, to maintain ABS as a CapeSpan in-house service, and to establish another platform to serve the entire fruit export and broader agricultural industry.

In 2012, Kobus Hartman led a PHI-funded project, initiated by the South African Agrochemical Database Consortium, to develop a fully-fledged web portal that houses an expanded, consolidated, web-accessible chemical information database of all the agrochemical products registered in South Africa. It was envisaged to be a crucial resource for role-players in agricultural production and marketing, retailers and consumers.

Thanks to Agri-Intel’s powers of systemisation, agrochemical information is no longer a confusing jumble.
Pre-harvest intervals (PHIs) refer to the time that has to pass between the last application of a pesticide and when fruit can be harvested for sale, immediate consumption. In other words, the withholding or safety period between application and harvest necessary to comply with the MRLs for the chemicals applied.

such as producers, packers and processors, producer bodies or associations, exporters (including the Fresh Produce Exporters’ Forum), importers, auditors, local and international retailers, agrochemical companies and their representatives, as well as CropLife South Africa and its associated bodies. It was also intended to assist regulatory stakeholders, including the Department of Health, the Department of Agriculture, Forestry and Fisheries (DAFF), analytical laboratories and certification bodies.

“One of the key features of the first phase of the Agri-Intel project was that it consolidated agrochemical information from various sources into one, easily accessible database,” says Mr Hartman. “It is still the only source of agrochemical information of this magnitude and scope in South Africa.”

SOURCING THE INFORMATION

An important source of this information is the labels of registered agrochemical products. Since these labels are legal documents, it is of utmost importance that the information is interpreted correctly and, where necessary, clarified with the registration holder. This not only meant that the Consortium had to maintain expert knowledge, but also required prompt communication between it and registration holders.

Upon the completion of the first phase of the project, the Consortium had met its objective to establish an accurate, verified, comprehensive and continuously updated and relevant database on export fruit types (citrus, pome and stone fruit, and table grapes) in PDF format, as insufficient funding was available to develop a full-scale database and reporting mechanisms to query and obtain results from the information in the database. Data had also been imported, tested and verified.

In terms of the fresh fruit industry, Agri-Intel now contains complete data for pome and stone fruit, table grapes and citrus in terms of MRL requirements in South Africa, the European Union, America and Russia; PHIs and information on UK retailers’ residue levels requirements and preferred chemicals.

Apart from providing information, the Agri-Intel website also facilitates one-to-one communication between local fresh produce suppliers and international markets. Suppliers can upload their spray records and residue analysis results. Certificates are also available for downloading and viewing by specific, designated retailers.

“We have quite literally moved from a dirt track to an autobahn when it comes to access of information,” says Mr Hartman.

THE ROAD AHEAD

In this age where information is generated and changed in the blink of an eye, the value of a website depends on the quality and frequency of its updates. “This remains a challenge for us,” says Mr Hartman. CropLife currently funds one permanent position for the maintenance of the database content, but funding is needed for website hosting and administration, further database maintenance and quality control, and further software development.

“There is so much more we can do,” says Mr Hartman. “For example, offering specialised services on a user-pays basis could turn Agri-Intel into a sustainable business.”

Building an information highway

From February to November 2013, the Consortium focused its efforts on developing flexible, web-accessible search and reporting mechanisms to retrieve the MRL, PHI and retailer-specific agrochemical information stored in Agri-Intel.

“Our vision was to give Agri-Intel users the ability to run efficient and directed searches and to easily compare MRL and PHI information in terms of different crops, agrochemicals, markets and retailers,” says Mr Hartman. “These tools were needed to achieve the website’s ultimate purpose, which is to assist in decision-making and to reduce the risk of non-compliance.”

By the end of 2013, the software development and testing had been completed. This included the database, an administration facility and reporting mechanisms to query and obtain results from the information in the database. Data had also been imported, tested and verified.

In terms of the fresh fruit industry, Agri-Intel now contains complete data for pome and stone fruit, table grapes and citrus in terms of MRL requirements in South Africa, the European Union, America and Russia; PHIs and information on UK retailers’ residue levels requirements and preferred chemicals.

Apart from providing information, the Agri-Intel website also facilitates one-to-one communication between local fresh produce suppliers and international markets. Suppliers can upload their spray records and residue analysis results. Certificates are also available for downloading and viewing by specific, designated retailers.

“We have quite literally moved from a dirt track to an autobahn when it comes to access of information,” says Mr Hartman.

The road ahead

In this age where information is generated and changed in the blink of an eye, the value of a website depends on the quality and frequency of its updates. “This remains a challenge for us,” says Mr Hartman. CropLife currently funds one permanent position for the maintenance of the database content, but funding is needed for website hosting and administration, further database maintenance and quality control, and further software development.

“There is so much more we can do,” says Mr Hartman. “For example, offering specialised services on a user-pays basis could turn Agri-Intel into a sustainable business.”

A wealth of information

• Almost 2 000 registered chemical labels (trade names).
• More than 500 active ingredients.
• Consolidated – all critical label information, MRLs and PHIs are in one location.
• Always accurate – unlike printed material, it is continuously updated and remains relevant.
• Flexible – can be quoted and filtered, because it is not only static documents.