

South Africa shifts to biological crop protection under EU rules

Biological crop protection, once considered supplementary, is now central to production strategies as export markets impose stricter residue regulations. IntelliGro stated that biological tools have become a necessary pillar for maintaining market access and securing long-term sustainability.

"Biological crop protection has quickly moved from being a complementary option to becoming essential, as part of holistic programmes that integrate chemistry and biology. It enables growers to retain market access, protect their soil and ecosystems, and still deliver high-quality yields," the company said.

According to Martin Booyens, technical marketing specialist for biological solutions at IntelliGro, with experience in Spain and Israel, the industry has reached a "turning point." He explained: "Growers are facing increased phytosanitary pressure, especially from the EU, where new regulations and stricter import inspections have recently been implemented. At the same time, we're losing access to chemical products at an alarming rate. Those who don't start taking biology seriously will fall behind."

Restrictions on chemical products include the CMR classification (carcinogenic, mutagenic, or reproductive toxins), while certain substances can only be handled by certified PCOs. The EU Green Deal aims for a 50% reduction in pesticide use and a 20% decrease in fertiliser use by 2030, pressuring exporting countries such as South Africa to move faster toward biological alternatives.

Booyens identified three main forces driving this shift: reduced availability of chemical products, tighter residue limits in Europe, and technological advances that allow biologicals to match chemical solutions for some pests.

"We've used natural enemies such as parasitic wasps and predatory mites for decades. The difference is that they used to be supplementary. Today, they form the backbone of integrated pest management (IPM), marking a shift away from over-reliance on chemistry, towards a balanced approach where biological solutions play a central role. International examples, such as Almería in Spain,

show what's possible. Once known for high residue levels, Almería is now a global leader in biological farming, with 40,000 hectares of crops under production," Booyens said.

He added that South African growers are exporting soft fruit, table grapes, and citrus with zero pre-harvest residues to strict markets. Local examples include peppers and cucumbers, where near-complete biological control is achieved in controlled environments, and citrus, where biological strategies include viruses for bollworms, sterile insect technology for fruit flies, and bicarbonate against black spot. In table grapes, *Bacillus*, bicarbonate, and *Trichoderma* are managing powdery mildew and *Botrytis*.

Booyens expects macrobiology, including beneficial insect breeding, to expand rapidly in South Africa over the next decade. "We're seeing large multinationals acquiring smaller biological firms and fast-tracking advanced technology into South Africa. This means better product quality and faster access to new generations of biological solutions for our farmers," he said.

He advised growers to start small with test blocks, ensure proper monitoring and equipment, and remain consistent, noting that the second season often delivers the clearest results.

Source: Food For Mzansi (<https://www.foodformzansi.co.za/biological-crop-protection-key-for-sa-market-access/>)

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