

# Increasing yield potential, Resource efficiency and Productivity with INTACTA Round Up Ready 2 Pro



**T**he introduction of INTACTA RR2 PRO® brings a new choice in insect control and convenience to farmers; increasing productivity, efficiency and value - leading to yields of higher quality and quantity.

## How can INTACTA RR2 PRO technology benefit your farm?

INTACTA RR2 PRO technology holds three key benefits that make this trait combination stand out in the market:

- PROTECTION against major pests that attack soybeans like African bollworm (*Helicoverpa armigera*)
- Increased yield potential through repositioned herbicide trait on the soybean DNA to MAXIMIZE yield
- IMPROVED tolerance to glyphosate herbicide provided by Round Up Ready 2 (RR2) Technology.

## What is African Bollworm and why is it so important to control it?

The African Bollworm, *Helicoverpa armigera*, is a lepidopteran insect pest capable of causing significant economic losses for growers if left unchecked. It is a polyphagous insect pest meaning that it is able to feed on a whole host of plant species and can cause significant damage in cultivated crops. Besides the obvious yield losses through direct feeding on the pods, secondary infections by opportunistic fungi and bacteria can take place. These secondary infections can significantly reduce the quality of the harvested soybeans and ultimately lead to further economic woes for the farmer. Controlling these insect pests effectively will lead to yields of higher quantity and quality.

## PROTECTION against major pests that attack soybeans like African bollworm (*Helicoverpa armigera*)

One of the main benefits of INTACTA RR2 Pro technology is the protection against

one of the most devastating insect pests in soybean production, the African Bollworm.

## How does INTACTA RR2 PRO technology offer protection?

- Resistance to African Bollworm is conferred through a *Bt* protein produced in INTACTA RR2 Pro Soybeans. The Cry1Ac *Bt* protein is highly efficacious against the African Bollworm
- The larval stage of the African Bollworm feeds on the INTACTA RR2 Pro soybeans, ingesting the *Bt* protein
- The larvae stop feeding and die within 72 hours.

## Increased yield potential through repositioned herbicide trait on the soybean DNA to MAXIMIZE yield

INTACTA RR2 Pro technology is helping farmers increase their yield potential by allowing farmers to farm more efficiently, sustainably and ultimately more profitably. Through extensive research on a molecular level, the Round up Ready 2 gene was placed precisely in a region of the soybean's DNA, resulting in a positive impact in the yield performance.

## A number of key factors contribute to this increase in yield potential:

- This higher yield potential is a direct result of the repositioning of the glyphosate-tolerance trait on the DNA of the soybean
- Protection from devastating yield losses caused by African Bollworm feeding through the introduction of the *Bt* gene
- Increased efficiency through a reduction in the number of applications of insecticides to the soybean crop.

## IMPROVED tolerance to glyphosate herbicide provided by Round Up Ready 2 (RR2) Technology

The improved tolerance to glyphosate is a crucial benefit in INTACTA RR2

Soybeans. The insertion of this gene allows farmers to control weeds consistently and effectively right from the very start. Keeping soybean fields weed-free is crucial to prevent competition from weeds which rob the soybeans of important nutrients, water and sunlight.

## What is a refuge area and why is it so important?

A refuge area is a vital tool in insect-resistance management and protecting this technology for years to come.

A refuge area is a portion of the farm or field which is not planted with *Bt* technology so that a portion of the African Bollworm population is never exposed to this technology and remain susceptible. Refuge should be planted according to the minimum recommendations indicated for soybean which is 20% of the total planted area.

It is important that farmers still carry out constant monitoring and use the additional measures of Integrated Pest Management (MIP) to ensure the efficacy of the trait.

With Bayer's new soybean trait INTACTA Round up Ready 2 PRO®, we are breaking ground and opening a world of possibilities for your farm, providing benefits that will help you improve productivity, resource efficiency and yield potential – helping you farm more sustainably and grow more with less.

For more information, contact Bayer South Africa on 011 921 5911 or visit [www.bayer.com](http://www.bayer.com).