

SEBASTIEN CHATRE

Syngenta Seeds S.A.S., 12, chemin de l'Hobit, F – 31790 Saint Sauveur

INTEGRATED CROP SOLUTIONS AGAINST *RHIZOCTONIA SOLANI* IN SUGAR BEET

**Des solutions intégrées contre *Rhizoctonia solani* dans des betteraves
sucrières / Integrierte Lösungen gegenüber *Rhizoctonia solani* in Zuckerrüben**

ABSTRACT

Rhizoctonia spp. has become a major threat for many different plant species including sugar beet worldwide. Up to now, more than 100 different *Rhizoctonia* spp. anastomosis groups (AG) have been identified in field by various monitoring studies. There are 14 different AGs of *Rhizoctonia solani* and of these it is mainly AG2-2IIIB and AG4 that are highly pathogenic to sugar beet. As a root crop, sugar beet derives all of its value from the accumulation of sugar in the tap root. Once the root has reached an optimal level of sugar accumulation, preservation until harvest time requires sustained control against various pests and diseases beginning already from a sufficient plant establishment.

Up to now genetic control has been the main way of providing control against *Rhizoctonia* spp. in sugar beet. Partial resistance or tolerance traits were found years ago, and today a broad range of genetics with various level of resistance are used commercially in various geographies. The use of such genetics have resulted in significant benefits to the sugar beet growers, among others in terms reduced numbers of loss plants and increased overall sugar yield in the field.

On the other hand, there is an increased pressure on sugar beet from *R. solani* due to various factors such as new agronomic practices (for instance reduced or no-till), new crop rotation systems (including alternative host plants e.g. corn), and culture intensification. As a further step in *Rhizoctonia* management Syngenta is now developing integrated solutions, combining genetics with new seed treatment and foliar compounds. This integrated strategy will provide a reliable control against a broad range of *Rhizoctonia* species including all anastomosis groups of *R. solani*, and hence maximize the efficacy of sugar beet production under a broad range of field conditions worldwide. Recent trials have confirmed the strength of combining semi-resistant and resistant hybrids with new seed treatment and foliar compounds, resulting in decreased *Rhizoctonia* infection. This combination will ensure healthy roots throughout the entire crop growing period, leading to a higher sugar yield for the growers and stability for the beet procurement of sugar industry.
