

MARTIN WEGENER¹, BERND HOLTSCHULTE²

¹Bayer CropScience AG, Alfred-Nobel-Str. 50, D – 40789 Monheim

²KWS SAAT AG, Grimsehlstr. 31, D – 37555 Einbeck

THE USE OF FORAMSULFURON + THIENCARBAZONE-METHYL IN ALS TOLERANT SUGAR BEETS – AN INNOVATIVE SYSTEM OF WEED CONTROL IN SUGAR BEETS

L'emploi de foramsulfuron et de thiencarbazone-méthyl sur des betteraves sucrières tolérantes aux ALS – un système innovant de gestion d'adventices en betteraves sucrières / Die Verwendung von Foramsulfuron + Thiencarbazone-Methyl in ALS-toleranten Zuckerrüben – ein innovatives System der Unkrautregulierung in Zuckerrüben

ABSTRACT

KWS SAAT AG and Bayer CropScience are jointly developing and commercializing an innovative system of weed control in sugar beet for the global market. The technology is based on the breeding of sugar beet cultivars that are tolerant to herbicides in the ALS-inhibitor-class with broad-spectrum weed control. This will give farmers a new opportunity to make sugar beet cultivation easier, more flexible in its timing and more environmentally friendly.

Joint research on developing the system began in 2001. The new sugar beet plants have a naturally occurring change in an enzyme involved in the biosynthesis of essential amino acids. During the development, sugar beets with this spontaneously changed enzyme were specifically selected and used for further breeding. As such, these varieties are not a product of genetic modification. The new concept will make it possible in future to use Foramsulfuron and Thiencarbazone-methyl as new active ingredients in sugar beet and control major broadleaved and grass weeds with low dose rates (max. 1.0 L/ha) of product and reduced number of applications (max. two applications). Both herbicides are already registered in maize.

Field studies with ALS-tolerant hybrids showed highest crop safety and a broad and reliable efficacy against a large range of major weeds. Official trials for an EU-wide registration of the herbicide started in 2012. Development and evaluation trials are ongoing. The variety inscription process of sugar beet cultivars is in preparation in different countries. The system is scheduled to be available to farmers in the second half of this decade.

In the presentation the breeding part of the system, the efficacy spectrum and the possible positioning of the new system will be described.