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IPM use of herbicides

Different Mode of Actions (MoA) should be selected for weed management in order to prevent low efficacy due to herbicide resistance. Herbicide resistance is a big issue in some weed species, and is an increasing problem.

DID YOU KNOW?
Diverse crop rotations ensure a diverse use of herbicides

Readiness for use: 

Efficacy: 

How it works

Herbicide use should focus on avoiding unilaterally use. A high diversity in choice of products with different modes of actions (MoAs) will help preventing herbicide resistance

- A combination of pre-emergence and post-emergence herbicides should be used in crops where this is relevant
- The pre- and post-emergence herbicide groups differ in MoAs
- Also differences in MoAs are found within the pre- and post-emergence groups
- You find the different codes for MoAs on the product (e.g. prosulfocarb has the code (N / 15) and ALS inhibitors the code (B / 2))
- Different MoAs can be combined in tank mixes or different MoAs can be used at different times in the season
- Some weed species are favored in some crops, and a diverse crop rotation that switches between different broad-leaved and monocotyledon species will in most cases favor a more diverse incidence of weeds
- Herbicides should be used in combination with other measures, e.g. culturaal, mechanical or physical weed control, to make a more robust weed control

Table 1. Cropping system evaluation - Risk of Resistance. From HRAC

MANAGEMENT OPTION	LOW RISK	MODERATE RISK	HIGH RISK
Herbicide mix or rotation in cropping system	> 2 modes of action	2 modes of action	1 mode of action
Weed control in cropping system	Cultural*, mechanical and chemical	Cultural and chemical	Chemical only
Use of same mode of action per season	Once	More than once	Many times
Cropping system	Full rotation	Limited rotation	No rotation
Resistance status to mode of action	Unknown	Limited	Common
Weed infestation	Low	Moderate	High
Control in last three years	Good	Declining	Poor

**Cultural control can be by using cultivation, stubble burning (if permitted), competitive crops, stale seedbeds, etc.*

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