

Weed control in soy with a finger weeder

Problem

Weeds within a row are poorly accessible and in the case of a late weed infestation, it can seriously disrupt the development of the crop and cause costly manual labour. Weed control in between rows with duck-foot tines is typically ineffective for controlling the weeds inside the seed rows.

Solution

In order to minimise weed competition in soy cultivation, weeds growing near the soy plants need to be controlled. The combination of a hoeing device with duck-foot tines and ridging discs with a finger weeder is able to control the weeds across the entire surface (Picture 1).

Outcome

The finger weeder is the only mechanical hoe that also controls weeds within the row thanks to a slanted position and adjustable overlap of the finger plates, and it greatly reduces manual labour. It offers good performance for most row crops.

Practical recommendation

- Pass once with the harrow 2 to 3 days after sowing the soy (blind harrowing), when many seed weeds have already sprouted. At this moment, the harrow is able to efficiently cover or expose the weeds (up to 90 % efficiency), but avoid damaging the soy seedlings.
- A second round with the harrow, applying little tine pressure (a precision tined-weeder recommended), is possible when the soy plants have developed their first pair of leaves.
- From the soy's two-internode stage (plant height of about 15 cm) onwards, the use of the finger weeder is possible, provided the crop is well-rooted and the weeds are - if possible - still at their sprouting stage (Picture 2). Ideally the finger weeder is combined with a hoeing device with duck-foot tines.
- Depending on the level of weed infestation, you can wait for up to 2 weeks between hoeing rounds. Re-sprouting weeds can be controlled 1-3 days after a hoeing round with the harrow. Usually, 2 to 4 hoeing rounds per crop should suffice.

Applicability box

Theme

Weed management

Geographical coverage

Global

Application time

Beginning with the 2- to 4-leaf stage of a crop, after good root growth. Most efficient against weeds at sprouting stage.

Required time

1 to 5 times

Period of impact

Current crop

Equipment

Finger weeder, possibly in combination with bladed hoe

Best in

Soy, sunflowers, sugar beets, leek, and cabbage varieties



Picture 1: Combination of finger weeder and duck-foot tines in soy. Picture 2: Finger weeder at work within the row. (Pictures: Goran Malidza, Institute of Field and Vegetable Crops, Novi Sad).