## Camera-controlled hoeing of row crops

### Problem

The closer sweeps get to the middle of the row, the more efficient hoeing becomes. However, minor driving mistakes or lack of precision put the crop at risk as plants can be uprooted or damaged.

### Solution

Hoeing with camera-controlled steering systems.

### Outcome

The distance of the operating tools from the middle of the row is reduced to as little as 2.5 cm at a working speed of 6-7 km/h (when the crop is in early development stage).

### Practical recommendations

**Observations and practical hints**

- The earlier the better: hoeing should be performed as soon as the row is visible.
- The more developed the crop is, the larger the distance between the hoeing sweeps and the centre of the row should be.
- In crusty soils, the working speed should be reduced during the early development stage of the crop to decrease the risk of uprooting the crop.

### Applicability box

**Theme**  
Weed management  
**Geographic coverage**  
Global  
**Application time**  
When the crop is usually hoed  
**Required time**  
Less than the conventional hoeing method  
**Period of impact**  
At hoeing  
**Equipment**  
Camera-controlled steering system  
**Best in**  
Summer row crops (such as soybean, maize, sunflower)

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*Picture 1: Hoe operating on soybean with camera assistance. Date: 23-07-2015 (Cristina Micheloni)*
Assessing and sharing results

Assessment of operational capacity: Quantify the time needed for camera-controlled hoeing compared to usual hoeing.

Assessment of weeds presence after hoeing: Quantify weeds presence in sample plots.

Use the comment section on the Farmknowledge platform to share your experiences with other farmers, advisors and scientists! If you have any questions concerning the method, please contact the author of the practice abstract by e-mail.

Further information

Links

- At [www.aiab-aprobio.fvg.it](http://www.aiab-aprobio.fvg.it), information on organic arable crop management is available in a biweekly bulletin and a topic-specific info sheet.
- The knowledge platform of the OK-Net Arable project offers information and practical updates on weed management and soil quality in organic arable cropping systems.

About this practice abstract and OK-Net Arable

Publisher: Associazione Italiana Agricoltura Biologica (AIAB), Italia
Via Molajoni 76 - 00159 ROMA
Tel. +39 064386450, info@aiab.it, www.aiab.it
IFOAM EU, Rue du Commerce 124, BE-1000 Brussels
Tel. +32 2 280 12 23, info@ifoam-eu.org, www.ifoam-eu.org

Authors: Stefano Bortolussi (AIAB-FVG)
Contacts: s.bortolussi@aiab.it
Permalink: Orgprints.org/32949

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Project website: [www.ok-net-arable.eu](http://www.ok-net-arable.eu)

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