

## Mechanical weeding

**Goal**

Significant reduce of the impact of agrochemicals on biodiversity

**Target group**

All farmers

**Description of the measure**

Mechanical weeding is a non-chemical alternative used by farmers to avoid plants' resistance to chemical molecules, or to avoid a farming input that is progressively becoming more expensive. Actually, organic farmers do manage the weeds mechanically in a successful way. However, mechanical weeding is not exclusively restricted to organic farmers. Some conventional farmers apply pesticides for insect and/or fungicide treatment but prefer to skip chemicals for weeding. By definition, herbicides affect species diversity at least in the area where they are applied and beyond if application is imprecise or the products mobile.



Pic. 1: Mechanical weeding (left) is an example of a good measure.  
Pic. 2: (right) pesticide drift, a bad example of weeding.

**Suitable sites**

- All soils

**How a good implementation looks like**

- An Integrated Weed Management Plan supported by technicians
- Mechanical weeding actions are included in the Farm Register Book

**Effects on biodiversity**

(ecosystems, species, soil biodiversity)



Avoid negative impact of pesticides on non-targeted terrestrial plants



Preservation of the soil microbiota.



Promotion of herbivorous insects and pollinators.



Source of food and shelter for birds while the flora are present.

<b>Other positive effects/benefit for the farmer</b>	<p>Non-chemical solutions are an interesting way of avoiding chemical resistance of some weeds to molecules and to remain independent of farming input fluctuating prices.</p>
<b>Indicator/key data</b>	<ul style="list-style-type: none"> <li>▪ Surface of farm without herbicides treatments.</li> <li>▪ Number of herbicides treatments substituted by mechanical weeding.</li> </ul>
<b>Risk and further recommendations</b>	<p>Mechanical weeding may be a new approach in some areas. In this case, a lot of work is needed to understand weeds, exploring the alternative options for herbicides.</p> <p>In some cases, for an optimum implementation, advisory system may be needed.</p>
<b>Timeframe</b> (When to start a measure and anticipated time for implementation)	<p>Permanent Action</p>
<b>Additional special resources/equipment/skills needed</b>	<ul style="list-style-type: none"> <li>▪ Depending on the type of mechanical weeding machinery or other resources may be needed.</li> <li>▪ Training</li> </ul>
<b>Reference</b>	<ul style="list-style-type: none"> <li>▪ Weeding - strategies, tools and technologies for sustainable weed management <a href="https://cordis.europa.eu/project/rcn/210490_en.html">https://cordis.europa.eu/project/rcn/210490_en.html</a></li> <li>▪ Alternatives to herbicide use in weed management – The case of glyphosate <a href="http://www.greens-efa.eu/files/doc/docs/0fd517cb3f95312725a003242b2ba9d0.pdf">www.greens-efa.eu/files/doc/docs/0fd517cb3f95312725a003242b2ba9d0.pdf</a></li> <li>▪ The impact of agricultural practices on biodiversity Alison McLaughlin a, Pierre Mineau b,* 'Sagittaria Ecological Services, /-/43 Rue Laurier, Hull, Que. JBX 3W4, Canada"National Wildlife Research Centre, Canadian Wildlife Service, JOO Blvd. Gamelin, Hull, Que. KIA 0H3, Canad ELSEVIER Agriculture. Ecosystems and Environment 55 ( 1995) 201-212</li> <li>▪ Effects of Herbicides on Non-Target Terrestrial Plants. Beate Strandberg *<sup>1</sup>, Céline Boutin <sup>2</sup>, Solvejg K. Mathiassen <sup>3</sup>, Christian Damgaard <sup>1</sup>, Yoko L. Dupont <sup>1</sup>, David J. Carpenter <sup>2</sup>, Per Kudsk <sup>31</sup> Department of Bioscience, Aarhus University, Vejlsovej 25, Denmark</li> </ul>

## Further information: [Knowledge Pool](#)

This Action Fact Sheet belongs to the training package for advisors of standard organisations and companies and was developed within the project LIFE Food & Biodiversity (Biodiversity in Standards and Labels of for the Food Industry). The main objective of the project is to improve the biodiversity performance of standards and sourcing requirements in the food industry by helping standard organisations to integrate efficient biodiversity criteria into their schemes and motivating food processing companies and retailers to include comprehensive biodiversity criteria into their sourcing guidelines.

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