



AGROECOLOGY FOR WEEDS

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AGROECOLOGICAL WEED MANAGEMENT REPOSITORY

The Agroecological Weed Management (AWM) Repository (<https://www.goodhorizon.eu/platform/awm-practices/>)

is a virtual space where you can freely and openly find information and educational material on current and agroecological weed management practices in the European Union. You can browse and learn about several weed management practices and crops.

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FALSE SEEDBED

DESCRIPTION & BENEFITS

The false seedbed technique involves creating a favorable environment for weed seed germination (e.g., after a rainfall or irrigation) and then destroying the emerged weeds before sowing the main crop. This practice is usually used to:

- **reduce weed pressure** in agricultural fields due to the expose of germinated seeds to unfavorable conditions or removal, also providing reduced subsequent waves of germination
- **reduce the reliance on herbicides** as this wave of germinated seeds is treated mainly with mechanical means or grazing
- **deplete the weed soil seedbank and minimize weed competition** during crop establishment

STRENGTHS

- Reduction of weed soil seedbank due to the germination of weed seeds that are controlled before the crop sowing
- Reduction of synthetic herbicide use due to mechanical control of germinated seeds
- Enhancement of soil moisture conservation and water use efficiency for crops by promoting early weed emergence and subsequent weed removal

WEAKNESSES

- Precise timing to ensure effective weed seed germination and subsequent control before crop sowing
- Risk of soil erosion and nutrient loss if not implemented properly, especially in areas with steep slopes or sandy soils
- Potential increased weed pressure if weeds are not properly controlled during the false seedbed preparation

OPPORTUNITIES

- Early-season weed control reducing the reliance on herbicides, giving advantage to the crops
- Potential cost savings due to less weed management operations after the control of the first wave of germinated seeds
- Combination with other weed management practices, such as mechanical control, grazing or bioherbicides

THREATS

- Risk of weed regrowth if false seedbed operations are not conducted thoroughly or if other weed management practices are non-effective
- Potential unsuitability for some crops and field conditions (e.g., areas with unpredictable weather patterns or limited access to water)
- Difficulties in areas with dense vegetation or high weed seed bank, requiring repeated applications or combinations of practices

TIPS

- **prepare the field properly** through shallow tillage or cultivation to stimulate weed seed germination, then remove the emerged weeds
- **use mechanical means or grazing** to manage the emerged weeds
- **left the field fallow or light tilled** to stimulate any remaining weed seeds to germinate (only if the time window until the crop sowing allows it)
- **choose carefully the timing of the operation** to prevent the risk of having weeds growing the same moment with the crop

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