

## Managing docks with the WUZI dock cutter

### Problem

How can excessive levels of docks in pastures be avoided without ploughing and cultivating too often? There is a need for innovation, as no mechanical treatment seems sufficient.

### Solution

The WUZI dock-cutter is a good way of controlling weeds manually, as the drill terminates the dock and prevents regrowth.

### Outcome

For each year that ploughing of a pasture is postponed, organic matter in the soil can build up to 1000 kg N per hectare. Thus, the dock-cutter leads to a build-up of organic matter in the soil and effective termination of docks without ploughing.

### Applicability box

#### Theme

Weed management

#### Geographical coverage

Global

#### Application time

Before the docks set seeds

#### Required time

20 to 30 seconds per dock plant

#### Period of impact

Current and succeeding crops

#### Equipment

WUZI dock-cutter in combination with a loader (preferably a mini-loader)

#### Best in

Pastures

### Practical recommendation

- The mounting of the dock-cutter needs to be adjusted in order to fit a mini-loader or a front-loader on a tractor. In Denmark, mini-loaders are already present on many farms.
- The docks are drilled by placing the drill on top of a dock and then using the oil pressure of the loader to turn on the cutter and terminate the dock. The cutter drills about 20 cm into the soil, which is enough to destroy the point of growth and thus prevent regrowth.
- The dock-cutter automatically plants grass seeds into the bare soil where the dock was treated. This is an important function, as the grass seeds will compete with docks germinating later in the growing season from seeds in the soil.
- Using the dock cutter is more convenient than forking- or digging-out the docks. However, it still needs 20 to 30 seconds per dock, one person and the machine. In a field with high dock infestation, the dock-cutter is too time-consuming as it only drills out one dock at a time. In that case, it is recommended to plough the field or cut the docks before they set seeds (which means when the seeds are green).



Picture 1: The dock-cutter is mounted on a mini-loader. Picture 2: The drill/cutter of the dock-cutter. Picture 3: The WUZI dock-cutter in action drilling out a dock. (Photos: Casper Laursen, SEGES).

### Practical testing

If this method seems to be interesting for your farm, we recommend that you test it under your own farm conditions as follows:

1. Divide an infested field into two trial plots and mark the limit between the two plots with sticks at both ends of the field.
2. Apply the new method on one of the two plots. The other plot can be cultivated as usual.

### Evaluation and sharing of the results

**Visual evaluation:** In order to evaluate the efficiency of the method, you can visually estimate and compare the dock density in the next growth in both trial plots. Document the results with photographs for later evaluation.

**Quantitative evaluation:** For a quantitative evaluation of the weed density, count the number of docks within a 1 m<sup>2</sup> area (e.g. formed by two 1 m long sticks) in six places. The average number of the six measurements multiplied by 10,000 will give you the hypothetical number of docks per hectare.

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

#### Further readings

- Report on Danish field trials on [Organic Eprints](#)

#### Weblinks

- Further tips on organic weed control at <http://farmknowlegde.org>

### About this practice abstract and OK-Net Arable

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

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