

Flame weeding – pre-emergence use

A non-chemical method that can be used to control weeds in e.g. maize, sugar beets and vegetable crops

DID YOU KNOW?
Preemergence flame weeding controls 30-40 % of weeds in some crops

Readiness for use: 

Efficacy: 

How it works

Flame weeding denatures proteins and disrupts cellular membranes in plant cells, eventually causing mortality. Flame weeding can be used before crop emergence in maize, sugar beets and many vegetables, either as full-width treatment or in bands. Effective against herbicide resistant weeds.

Flame weeders can be used when the soil is not suitable for cultivation and when soil disturbance is to be avoided to prevent emergence of new weed flushes. As with pre-emergence weed harrowing, pre-emergence flame weeding is targeted against weed seedlings while avoiding crop damages.

- Flame weeding is applied 1-2 days before crop emergence
- Pre-emergence flame weeding controls all emerged weed seedlings but later weed flushes need supplementary treatments
- Efficacy is greatest against weeds at the cotyledon stage
- With full-width or band application, the consumption of propane gas is 30-60 kg ha⁻¹ and 15-30 kg ha⁻¹, respectively
- The method is commonly known, and equipment is accessible on the market
- Can operate with driving speeds up to 8-10 m/s, depending on the conditions for application
- Pre-emergence flame weeding can be used in combination with post emergence flame weeding, or mechanical control depending on the crop

Figure 1. Flame weeder in action. www.envo-dan.dk



Read more

[Thermal weeding](#)

[Flame weeding in no-till vegetables crops](#)

[Video: Thermal weeding, after emergence](#)

CONTACT

SEGES
INNOVATION

Jens Erik Jensen
SEGES Innovation P/S
jnj@seg.es.dk
+45 2171 7706

Marian D. Thorsted
SEGES Innovation P/S
mdt@seg.es.dk
+45 2475 7914



AARHUS
UNIVERSITET

Bo Melander
Aarhus University
bo.melander@agro.au.dk
+45 22 28 33 93