



**Emerger**<sup>®</sup>

# Crop update: carrots

## Now approved for post-em use

Best use guidance: April 2020

Emerger is a unique pre-emergence herbicide for potatoes, now available with both pre-emergence and post-emergence EAMUs\* to control weeds in carrots, parsnips, celeriac, Jerusalem artichokes and root parsley (EAMU 2020/1101). In addition to its broad spectrum of control, carrot and parsnip growers will benefit from its contribution to control of annual meadow-grass, knotgrass, charlock, cleavers and fat hen.

### Product profile

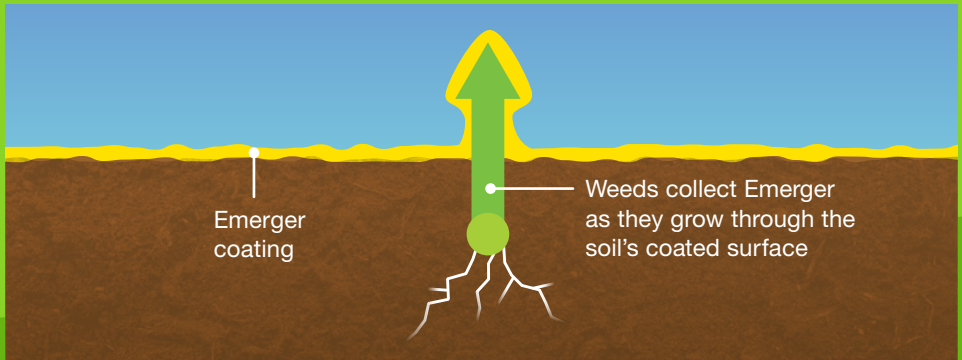
<b>Active substance</b>	Aclonifen
<b>Formulation</b>	600 g/L SC
<b>Latest timing</b>	Pre-emergence use BBCH 0 Post-emergence use BBCH 12 (2 true leaves)
<b>Maximum total dose pre-emergence</b>	1.75 L/ha
<b>Maximum total dose post-emergence</b>	0.65 L/ha
<b>Aquatic buffer zone</b>	6 m

\*Before use of Emerger under an Extension of Use Authorisation (EAMU), users must have a copy of the EAMU authorisation which can be downloaded from CRD's website: <https://secure.pesticides.gov.uk/offlabels/search.asp>

Users must follow all conditions and advice in EAMU notice as well as the safety information on the label. These extensions of the authorised use provide for the use of Emerger in respect of crops and situations other than those included on the product label. Neither the efficacy or the phytotoxicity of the product for which an Extension of authorisation has been granted have been assessed and, as such, the user bears the risk in respect of failures concerning its efficacy and phytotoxicity.

## How does Emerger work?

- Novel herbicide MoA – Aclonifen is an SPS Inhibitor, a unique diphenyl-ether.
- Weed symptoms are bleaching and chlorosis of young shoot tissue.
- Shoots not roots – Aclonifen is taken up by the hypocotyl (BLW) / coleoptile (monocots) or cotyledons and translocated to the meristems.
- This mode of uptake leads to consistent weed control.
- For optimal uptake and activity, Emerger should be applied uniformly to the ground surface to form a homogenous film.
- Friable and level seedbeds aid efficacy.



## Bayer Weed Screen 2019

Drilled 4<sup>th</sup> April – Cv. Nairobi F1 – Pre-em app. 8<sup>th</sup> April (no post-em applied)  
14<sup>th</sup> June 68 DAA



Untreated



Emerger 1.75



Emerger 1.75  
Stomp 2.5  
Gamit 0.1



Emerger 1.75  
Stomp 2.5  
Gamit 0.2

## Suggested use of Emerger:

Pre-em application of 1 L/ha with either a single post-em application of 0.6 L/ha at two true leaves or two sprays of 0.3 L/ha at the one true leaf stage and again at two true leaves.

## Broad-leaved pre-emergence weed control

Average mean control at 1.75 L/ha (>85%)	Number of trials	Average mean control at 1.75 L/ha (85% > 70%)	Number of trials
<i>Amaranthus</i>	7	<b>Black Bindweed</b>	10
Annual Mercury**	6	<b>Cleavers</b>	10
Chickweed	3	<b>Common Hemp Nettle**</b>	3
Common Field-speedwell	4	<b>Field Hemp Nettle</b>	2
False Mayweed	7	<b>Field Pansy</b>	8
Fat Hen	16	<b>Redshank**</b>	15
Field Penny-cress	13	<b>Small-flower Cranesbill**</b>	3
Pale Persicaria	2		
Red Dead-nettle	9	<b>Average mean control at 1.75 L/ha (70% &gt; 55%)</b>	<b>Number of trials</b>
Scentless Mayweed	5	<i>Datura**</i>	3
Shepherd's Purse	12	<b>Fumitory</b>	4
Volunteer Oilseed Rape**	8	<b>Knotgrass**</b>	4
Wild Pansy	12	<b>Runch**</b>	4
		<b>Scented Mayweed**</b>	8

\*\*Indicates the data contained for this weed is from a dose rate of 1.5 L/ha Emerger, due to reduced data being available at 1.75 L/ha. Increased control may be seen at 1.75 L/ha.

## Grass weed control

Average mean control at 1.75 L/ha (85% > 70%)	Number of trials
Annual meadow-grass	4
Barnyard Grass	11
Loose Silky-bent	3

## Emerger weed spectrum – post-emergence, average control

Weed Species	0.33 L/ha	0.66 L/ha
<i>Amaranthus sp.</i>	76	82
<i>Chenopodium sp.</i>	90	100
Sowthistle		100
Small Nettle	38	50
Hedge Mustard	40	53

Average control taken from 2/3 trials, post emergence application only.



## Key learnings

- ✔ Irrigation around emergence or early afterwards can cause crop losses – though mostly only where in tank-mix with other herbicides.
- ✔ Greater potential for crop effect where tank-mixing with pendimethalin and clomazone +/- DFF. Trials indicate that much of the risk at emergence is associated with the inclusion of DFF. This resulted in some crop thinning, especially when using high doses of Emerger, and 50g DFF.
- ✔ Suggested use of Emerger could be a pre-emergence application of 1 L/ha with either a single post-emergence application of 0.6 L/ha at two true leaves or two sprays of 0.3 L/ha at the one true leaf stage and again at two true leaves.
- ✔ Phytotoxicity risk dependent on crops ability to metabolise herbicides.
- ✔ A wide array of physical tank mix compatibilities can be found on our **website**.
- ✔ Maintain constant agitation of any tank mix containing Emerger.
- ✔ Avoid drift to crops sensitive to aclonifen e.g. sugar beet and brassicas.
- ✔ Apply Emerger pre-emergence of the crop, as soon after drilling as possible.
- ✔ Do not leave the sprayer filled with the spray solution standing for long periods.

For further guidance on using Emerger in carrots visit our **website** to watch Howard Hinds, Root Crop Agronomy, Ian Holmes, Strawsons and Angela Huckle, ADAS discuss their experiences of using the product or contact your local **CTM**.