FAQ031 Phasing out of non-selective herbicides

Increasing elimination of non-selective herbicides leads to application gaps

Worldwide, the new approval of pesticides and herbicides in particular, especially those with new modes of action, has almost come to a standstill. At least in Europe, the approvals of practically all widely used herbicides have not been or will not be renewed for very different reasons.

Next, in 2023, the most important (in terms of application area) non-selective herbicide glyphosate will most probably no longer receive a new approval. Glyphosate is used in Germany on approx. 40 % of all agriculturally used areas. A short history of the approvers can be found in the following table.

Active substance (e.g. product name)	End of approval/ end of use-by period (Europe)	Reason for prohibition	Main area of application	Substitute at time of end of use
Paraquat	2007	Very high human toxicity	Siccation, total herbicide	Diquat, Glyphosate
Glufosinat (e.g.. Basta)	2015/2017 (finally 2018/2019)	toxic for reproduction	Total herbicide, potato siccation	Glyphosat, Diquat
Diquat (Reglone)	2018/2019	High human toxicity	Potato siccation	Pelargonic acid Carfentrazone, Pyraflufen
Carfentrazone-Ethyl (Shark)	2019/2021 (?)	Various toxicity	Total herbicide, potato siccation	Pelargonic acid
Pyraflufen (Quickdown)	2019/2021 (?)		Potato siccation	Pelargonic acid
Glyphosat (Roundup)	2023 (?)	Discussion on insect damage, cancer risk, biodiversity reduction, resistances, soil enrichment	Volunteer cereals pre-emergence treatment post-emergence treatment fruit and vineyard greening control cereal-siccation	Where possible and economic: pelargonic acid + selective herbicides

The table clearly shows that by 2023 at the latest only pelargonic acid may be approved. This substance has a good ecological basic profile, but due to the high application quantities and costs alone it cannot be the sole solution for all applications.

This means that extensive applications with chemical total herbicides and problem-free chemical desiccation applications will soon be a thing of the past and must be replaced by other technologies.

In addition, however, soil protection and reactions to climate change are creating new areas of application for the targeted use of systemic herbicide applications that have to be carried out without soil movement if possible, but hardly any chemical active ingredients are available.

Crop.zone creates new technologies for plant control here, which must then be adapted to the individual areas of application. Crop.zone is working on equipment and processes for potato cultivation in particular to ensure that the efficient production of high-quality potatoes for a wide range of applications remains possible in Europe.