



**Paul Goddard**

Stewardship and Value Chain  
Manager, BASF Agricultural  
Solutions

# Ensuring pulse weed control options for the future

Paul Goddard of BASF reminds us of the limitations we have in post-emergence herbicides for peas and beans, the issues which threaten its future, and the recommended actions we can all take to preserve it. The stewardship guidance he sets out is fully supported by PGRO.

With limited options for weed control in pulses, it is vital we all do everything we can to protect the chemistry that is available to us. We need 'best practice' to be 'standard practice.'

Bentazone, as in a number of herbicides such as Basagran SG, has been identified from official monitoring as the herbicide most frequent to exceed the Drinking Water standard in groundwater, and is increasingly found in surface water. All formulations of Bentazone have the potential to be found in water and the Stewardship Guidance applies to them all. Hence, to prevent or minimise movement to water all applications need to be as 'best practice.'

## How does Bentazone get to water?

Bentazone is extremely soluble and highly mobile in soil. Even with use in the drier months of the year, this combination results in Bentazone appearing in water. All pathways to water matter and everybody can help to prevent and minimise this happening. Leaching to groundwater is more likely on vulnerable soils. Surface water may be reached via drain flow, surface runoff or spray drift.

## What can I do for water?

Know if your fields are on vulnerable soils to groundwater leaching and treat following Bentazone Stewardship Guidance:

GROUNDWATER		High Risk Areas*	All Other Areas
Soils	Shallow (<30-35cm) and stony soils (>10% surface covered) on chalk/limestone	Do not use	Avoid use
	Shallow (<30-35cm) soils on sandstone	Do not use	Avoid use
	Soils with shallow groundwater (<1m below surface)	Do not use	Avoid use
	Soils with low organic carbon (<1%)	Do not use	Avoid use
	ALL OTHER SOILS	OK to use	OK to use
Timing	Spring and Summer	OK to use after 1 April	OK to use
	Autumn and Winter	Do not use	Do not use
Rate	All soils	Do not use >1000g AI/ha/year	Avoid use >1000g AI/ha/year

\* Drinking Water Groundwater Safeguard Zones for Bentazone or nitrate. Groundwater Source Protection Zones 1 + 2 (see Environment Agency website "What's In Your Back Yard (WIYBY)."

## What are shallow and stony soils on chalk or other limestone?

Soils that have a low maximum ploughing depth (<30-35 cm) with a high content of stones of >1 cm in topsoil and at the soil surface (>10% of surface area). They also have a high pH (>7).

## What are soils with shallow groundwater?

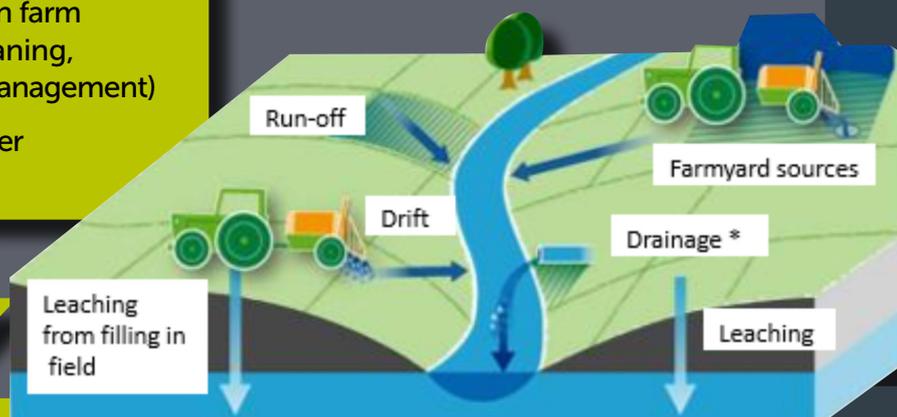
Soils where groundwater occurs <1m below the soil surface for at least part of the year. These soils are generally located in river valleys and lowlands. For some of these soils, the high groundwater level may lead to limited opportunities to use heavy machinery.

## 1. Farmyard sources

- Handling on farm (filling, cleaning, remnant management)
- Before / after spraying

## 2. Field sources

- Spray drift
- Field drainage
- Surface run-off
- Leaching



Can be avoided

Can be minimised



Groundwater issues can occur on all types of soils and situations across the farming regions of the UK.

**Protect surface waters from leaching by following Bentazone Stewardship Guidance:**

SURFACE WATER	
Rainfall	Do not apply if heavy rainfall is likely within 48 hours
Drain flow	Avoid application when drains are flowing or likely to flow within 7 days
Run-off, Spray drift	Use a minimum 6m grass buffer strip
Rate	Do not use more than 1000g AI/ha/year

The maximum rate of Basagran SG has been reduced to 1.1 kg/ha delivering 957g AI/ha.

### Product labels with the higher rate of 1.65 kg/ha:

- Last sales are 31st December 2018. (BASF and distribution)
- Latest use (disposal and storage) by 31st December 2019.
- Use Bentazone as late as possible to reduce leaching probability, but not if soils are cracked or saturated

### Do not apply in autumn/winter.

All formulations of Bentazone have the potential to be found in water and the Stewardship Guidance applies to them all. To prevent or minimise movement to water all applications need to be as 'best practice':

- Point pollution sources (farmyard runoff, spillages) must be avoided
- Do not exceed 1000g AI/ha/year
- Know if you have vulnerable soils and treat accordingly
- Use buffer zones against water courses
- Give consideration for rain being forecast
- Use the Bentazone Water Protection Advice Sheet

<https://voluntaryinitiative.org.uk/media/2181/Bentazonemarch2017final.pdf>

### For more information on Bentazone Stewardship Guidance visit:

[www.agricentre.basf.co.uk/agroportal/uk/en/about\\_us\\_3/water\\_stewardship/Bentazone\\_stewardship\\_stewardship.html](http://www.agricentre.basf.co.uk/agroportal/uk/en/about_us_3/water_stewardship/Bentazone_stewardship_stewardship.html)

or

[voluntaryinitiative.org.uk/schemes/stewardship/Bentazone-water-stewardship/](http://voluntaryinitiative.org.uk/schemes/stewardship/Bentazone-water-stewardship/)