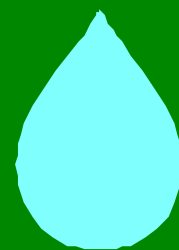


Before Spraying

The LERAP Scheme - Operator Advice



The LERAP scheme can appear complicated hindering its uptake and reducing the protection of watercourses. This guide takes an operator focussed approach to understanding and working with LERAPs, Full details can be found in “LERAP Horizontal Boom Sprayers New Guidance” produced by DEFRA in 2001 and available on the PSD website: www.pesticides.gov.uk. This guide includes extra information to help answer operator’s questions and give practical advice on LERAPs.

💧 Why buffer zones & LERAP are important to your spray operation?

- Buffer zones next to watercourses are intended to give additional **protection to aquatic life**.
- A label requirement for a 5m buffer zone next to a watercourse shows the product has a particular **risk to aquatic life**.
- LERAP offers **practical benefits** as it allows a reduction in the width of the buffer zone adjacent to a watercourse while ensuring the environment is protected.
- Before you spray near water **you must know if your product requires a watercourse buffer zone** and its width.
- The **availability of some familiar products** may depend on users complying with the LERAP or the watercourse buffer zones.
- By complying with the LERAP or buffer zone users ensure **a viable agriculture, a healthy environment and their livelihood**.

But first.....

💧 Does LERAP apply to your spray operation?

- If the label on the product you intend to spray states it requires a 5m buffer zone near a watercourse you **COULD** benefit from the LERAP scheme to reduce the buffer zone width.
- If however the label states your product is “NOT ELIGIBLE FOR BUFFER ZONE REDUCTION UNDER THE LERAP SCHEME” then your product is classified **LERAP A** and you **CANNOT REDUCE THE BUFFER ZONE**.
- Alternatively if the label states your product requires a buffer zone near a watercourse **AND** that you can reduce it using the LERAP scheme then your product is classified **LERAP B**, and you **MAY BE ABLE TO REDUCE THE BUFFER ZONE**.
- If there is not a buffer zone requirement stated on your product’s label for use near a watercourse, or there is no watercourse adjacent to the spray site, then the LERAP scheme **DOES NOT APPLY**.
- Starting 2003 onwards look out for the new label format that carries a LERAP symbol (under SAFETY PRECAUTIONS; Environmental protection) that clearly states the products LERAP status. Examples are overleaf.

💧 Your questions and the answers

1. Why is LERAP important?

- LERAP offers benefits to both the user and the environment by allowing you to reduce the pesticide buffer zones, according to your specific situation, to optimise the area of treated crop while still protecting aquatic life from products that pose the greatest risk.
- **The continuing approval of some products may depend on you fully complying with buffer zones.**

2. Can I use LERAP with my chosen pesticide product?

- Yes if the product label carries a buffer zone requirement **AND** states you can reduce the buffer zone using the LERAP scheme (a “category B” product).
- No if the product label says that the product is “NOT ELIGIBLE FOR BUFFER ZONE REDUCTION UNDER THE LERAP SCHEME” (a “category A” product).
- **Remember if you are using a pesticide that does not have a buffer zone requirement, or is not LERAP classified, then the LERAP scheme does not apply.**

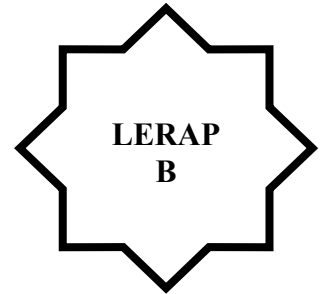
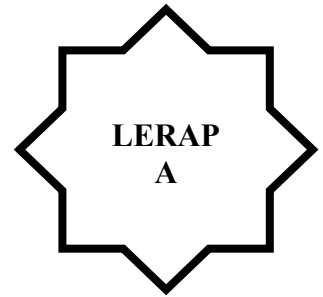
3. How do I perform a LERAP?

- If you choose to use a LERAP category B product, the following **3 steps** will guide you through a full LERAP assessment (see later).
- **Remember that if you choose a LERAP category A product you cannot reduce the buffer zone.**

Operator Top Tips

- Equipment** with a 3 star LERAP Low-Drift rating only requires a 1m buffer zone at any recommended label dose, not exceeding the max. irrespective of width of the watercourse.
- Dry watercourses** only require a 1m buffer zone at any recommended label dose, not exceeding the max.
- Follow label advice** for a 5m watercourse buffer zone if you do not wish to use LERAP to reduce the buffer zone.
 - Discuss** with the landowner/farmer/advisor, where appropriate, the watercourse buffer zone requirements for your spray operation.
 - Dosing** at no more than 1/4 of the maximum recommended label dose only requires a 1m buffer zone irrespective of the width of the watercourse.
 - Measure** the buffer zone width from the top of the bank of the watercourse.
 - Tank mixing** products does not mean you add the buffer zones of the separate products. Use the widest buffer zone requirement from the individual products.
 - Ditches** are watercourses where buffer zones, and thus LERAPs, can apply.
 - Spray swath** may be greater than the boom length therefore the edge of the swath should be used for the measurement of the buffer zone width. A border nozzle at the last nozzle position gives a more precise swath edge.
 - Tramlines** dictating the travel lane of the sprayer may mean a switch to low drift nozzles will extend beyond the first bout width to meet the minimum 12m required from the top of the bank.
 - Switching off boom sections** when following tramlines is a good solution provided the buffer zone requirement is satisfied.
 - Repeat applications** of the same product on the same area, where dose reduction was used to reduce the buffer zone, cannot be made with 48 hours.
 - No need to repeat the LERAP** if at some later date you repeat the spray application on the same site, applying the same product, with the same equipment unless the watercourse has changed.

New LERAP stars make it easier to identify those products with a LERAP requirement



The Three Steps of a LERAP

Step 1. Details you need about your spray operation.

i) What's the size of the watercourse?

- Measure it at its narrowest point next to the spray site (see Figure 1).

Is it?

1. Less than 3 meters	2. Between 3 and 6 meters
3. Wider than 6 meters	4. A dry ditch

- You need not re-measure the watercourse every time you spray if its width has not changed or if the ditch is still dry.
- Record this measurement as part of the LERAP record (see Step 3).

ii) What dose rate of pesticide do you plan to use?

- Calculate what percentage of the max. dose, shown on the label, is the dose that you intend to use.

$$\frac{\text{Dose you intend to use}}{\text{Max. dose}} \times 100 = \%$$

- Is it?

1. Up to 25% (= 1/4 rate)	2. 25.1 - 50% (= 1/2 rate)
3. 50.1 - 75% (= 3/4 rate)	4. 75.1 - 100% (= full rate)

- Remember if you intend to use 1/4 rate of any category B product, simply apply a 1m buffer zone, from the top of the bank, in all situations. Your LERAP assessment is now complete go to STEP 3.

iii) What is the LERAP low-drift status of your sprayer or nozzles?

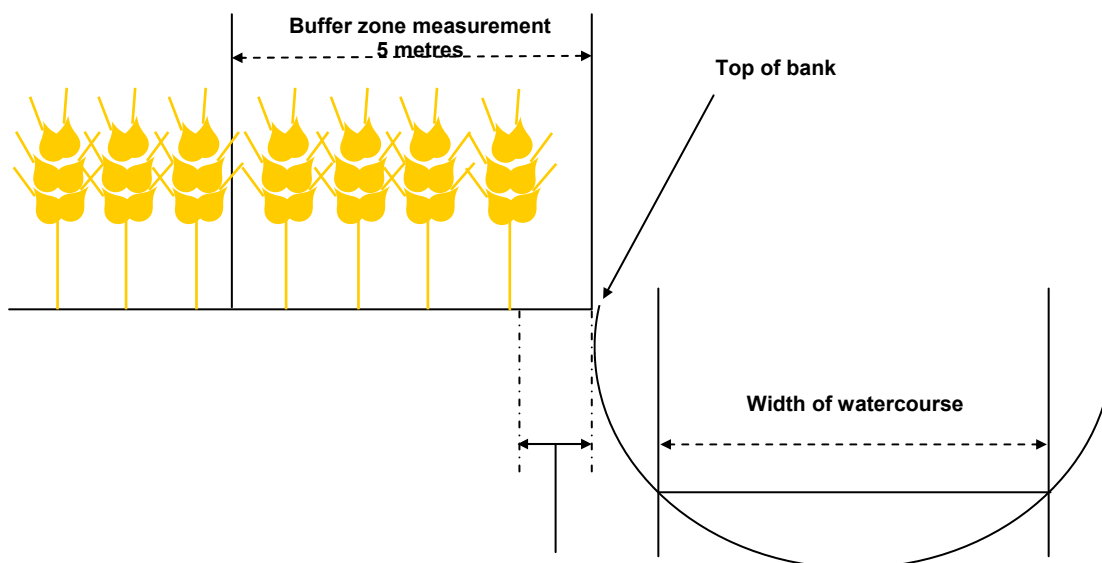
- For general advice on nozzle selection see the joint CPA “Nozzle Selection and Maintenance; A Practical Guide”.
- For the most up to date list of recognised LERAP low-drift sprayers and nozzles look on the Pesticides Safety Directorate’s (PSD) website. [Http://www.pesticides.gov.uk/farmers/leraps/lerap-arable.htm](http://www.pesticides.gov.uk/farmers/leraps/lerap-arable.htm)
- Manufacturers can apply to have their equipment granted an official star rating for LERAP low-drift status.
- You must use the equipment in compliance with its operating instructions that qualify it for the low-drift status. Take particular care of speed and pressure requirements.
- **Equipment not formally recognised by PSD for the purposes of the LERAP should be considered “standard reference” equipment irrespective of manufacturers claims.**
- Is it?

1. Standard Reference	2. Low-Drift 1 -star
3. Low-Drift 2-star	4. Low-Drift 3-star

- **Remember using 3-star equipment allows you to simply apply a 1m buffer zone from the top of the bank for all category B products alongside all watercourses. Your LERAP assessment is now complete go to STEP 3.**
- Record you sprayer or nozzles LERAP low-drift star rating as part of your LERAP record (see **STEP 3**).

Step 2. What will be the width of your buffer zone?

Figure 1. Buffer zone and watercourse widths



Buffer zone may be reduced to 1 metre by doing a LERAP

Note: where the reach of the calibrated spray swath is greater than boom length, the edge of the swath should be used for the measurement of the buffer zone width.

- **Remember if a ditch is dry at the time of application, simply apply a 1m buffer zone from the top of the bank. Your LERAP assessment is now complete, go to STEP 3.**
 - Using the information you collected in **STEP 1** you can now work out what buffer zone reduction you can make using the buffer zone table below.
- What was the star rating for your sprayer and nozzles?**
 - Use this information to select **SECTION 1,2,3 or 4** of the buffer zone table.
 - Then using only the section you selected...
 - Find the column that has the dose rate you intend to use**
 - Then still using the section you selected...
 - Find the row that has the size of your watercourse**
 - Finally where the selected row and column cross, this is the buffer zone measurement you can use.

BUFFER ZONE TABLE - Showing buffer zone widths in metres

Start Here →	SECTION 1 Standard Equipment				SECTION 2 *Star Rating Equipment				SECTION 3 **Star Rating Equipment				SECTION 4 ***Star Rating Equipment			
Dose rate → Size of stream ↓	Full rate	3/4 rate	1/2 rate	1/4 rate	Full rate	3/4 rate	1/2 rate	1/4 rate	Full rate	3/4 rate	1/2 rate	1/4 rate	Full rate	3/4 rate	1/2 rate	1/4 rate
<3m	5	4	2	1	4	2	1	1	2	2	1	1	1	1	1	1
3-6m	3	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1
>6m	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Dry	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

STEP 3 - Record the Result of your LERAP Assessment

- The LERAP scheme legally requires a record of the result for each LERAP assessment.
- If you have followed the label recommendations and not reduced the buffer zone width then simply record this in your pesticide treatments records.
- If you have reduced the buffer zone then you must record the details of the assessment that permitted the reduction.
- Records of your LERAP assessment must be kept for 3 years from the date of the spray operation.

💧 The LERAP Record

Dose	<input type="checkbox"/> Full	<input type="checkbox"/> 3/4	<input type="checkbox"/> 1/2	<input type="checkbox"/> 1/4
Sprayer	<input type="checkbox"/> Standard	<input type="checkbox"/> 1-star	<input type="checkbox"/> 2-star	<input type="checkbox"/> 3-star
Watercourse width	<input type="checkbox"/> Less than 3m	<input type="checkbox"/> 3 to 6m	<input type="checkbox"/> More than 6m	<input type="checkbox"/> Dry ditch
Width of buffer zone applied	<input type="checkbox"/> 4m	<input type="checkbox"/> 3m	<input type="checkbox"/> 2m	<input type="checkbox"/> 1m

Date of LERAP _____

Congratulations you have completed the procedure for a LERAP assessment, now....

...Spray the crop

- The farmer/landowner must confirm with you, the spray operator, that you know the width of the buffer zone to be used.
- Remember if you use LERAP low-drift spraying equipment to reduce the width of a buffer zone, the same equipment must be used to spray the crop for a minimum of 12m measured from the top of the bank of the watercourse.
- And finally, don't forget...
- Different rules apply to broadcast air-assisted orchard sprayers <http://www.pesticides.gov.uk/farmers/leraps/lerap-orchard.htm>
- Designating a 10m strip of set-aside along the watercourse would ensure compliance with buffer zone requirements for water protection.
- You cannot reduce buffer zones designed to safeguard hedges, field margins etc. under the LERAP scheme.
- There is a legal responsibility on the farmer/landowner to check that the LERAP has been properly performed and recorded.
- ALWAYS READ THE PRODUCT LABEL - FOLLOW LABEL ADVICE.
- At all times follow the "Green Code of Practice for the Safe Use of Pesticides on Farms and Holdings".



The advice in this Guide has been prepared after consultation with the Pesticides Safety Directorate, operators and trainers.

This Guide was produced by the Crop Protection Association as part of The Voluntary Initiative.

The Voluntary Initiative is a programme of measure agreed by Government to minimise the environmental impact of pesticides.

