

## Controlling weeds, pests and diseases while looking after people, water and wildlife

A guide for farmers and land managers





## WaterSource – Our Catchment Management Approach

**WaterSource** - looking after the land around our rivers, reservoirs and groundwater to protect our drinking water for years to come.

Doing this will mean we can use fewer chemicals and energy to treat drinking water. This is good news for our customers and our beautiful environment.

**Farmers and land managers can all play their part.**

**PestSmart** is our latest WaterSource campaign. Pesticide is a collective term for substances used to control weeds, pests and diseases. These are also known as Plant Protection Products.

Routine monitoring of river and reservoirs supplying drinking water has shown an increase in detections of pesticides within the last few years. Whilst levels are too low to pose a risk to those drinking the water they are sufficient to breach rigorous EU Drinking Water Standards. These standards require levels of all pesticides to remain below one tenth of part per billion, the equivalent of one blade of grass in 100,000 hay bales.

We're working together with all users groups, including farmers to encourage "smarter" techniques to reduce impact of pesticides on people, water and wildlife now and for years to come.

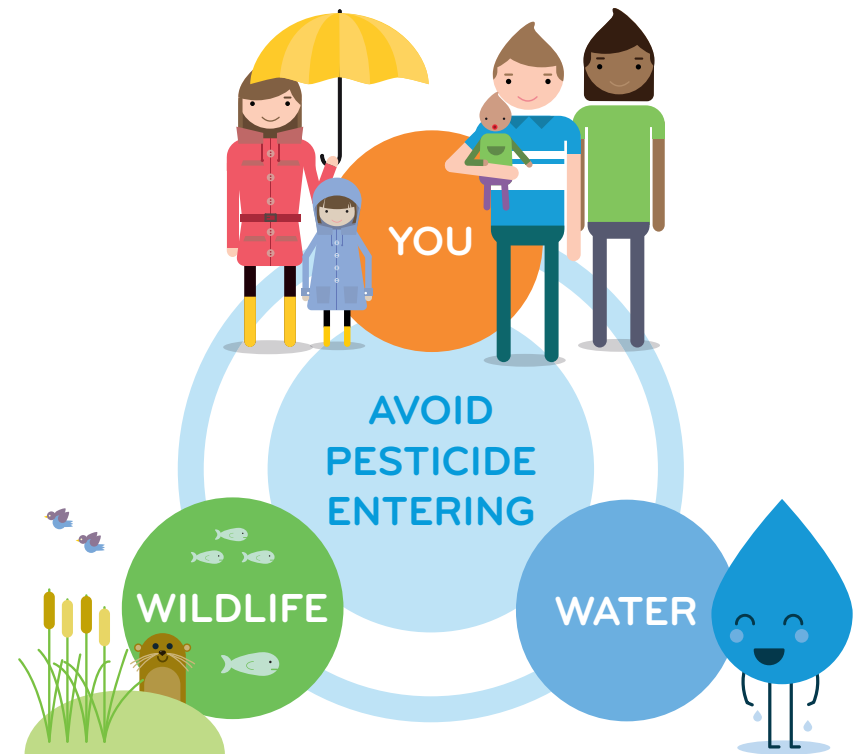


This booklet has been produced with input from our PestSmart partners from across the agricultural sector.



## Pesticides are commonly used to control weeds, pests and diseases

Although highly regulated, there is still a risk they can affect people, water and wildlife if they are used, stored or disposed of incorrectly.





## Take a Smarter Approach

Working through the problem to find the best solution to tackle weeds, pests and diseases can result in better results and longer term control.

### 1 What's the problem?

Talk to your BASIS qualified adviser about the underlying causes of problem weeds, pests and diseases, and best ways to tackle it in the short term and avoid the problem in the future.

#### Examples

- Regular and consistent crop inspection during the growing season
- Learn to identify early stages of key diseases, weeds and pests
- Get advice from a suitably qualified BASIS adviser or agronomist

### 2 How to avoid it?

Understand why weeds and pests flourish and help prevent infestations.

#### Examples

- Look after the soil structure; avoiding compaction to ensure target crops flourish preventing the opportunity for weeds to establish
- Soil test regularly and follow a nutrient management plan
- Encourage and protect predators to naturally control pests
- Consider altering your grazing regime as it could be encouraging weed growth

### 3 Are there non-pesticide controls?

Using an alternative, non-chemical method could provide satisfactory control. Before you undertake any activity, check for restrictions on land e.g. Habitat land under Glastir.

#### Examples

- Mowing or topping weeds can knock back growth
- Plant cover crops to encourage natural predators like birds

### 4 Is the use of pesticide justified?

Only use a pesticide to control weeds, pests and diseases where necessary using appropriate, targeted products and methods. Protection of people, water and wildlife should be paramount.

Follow the advice and requirement given on product label and any additional advice given by the BASIS qualified adviser.

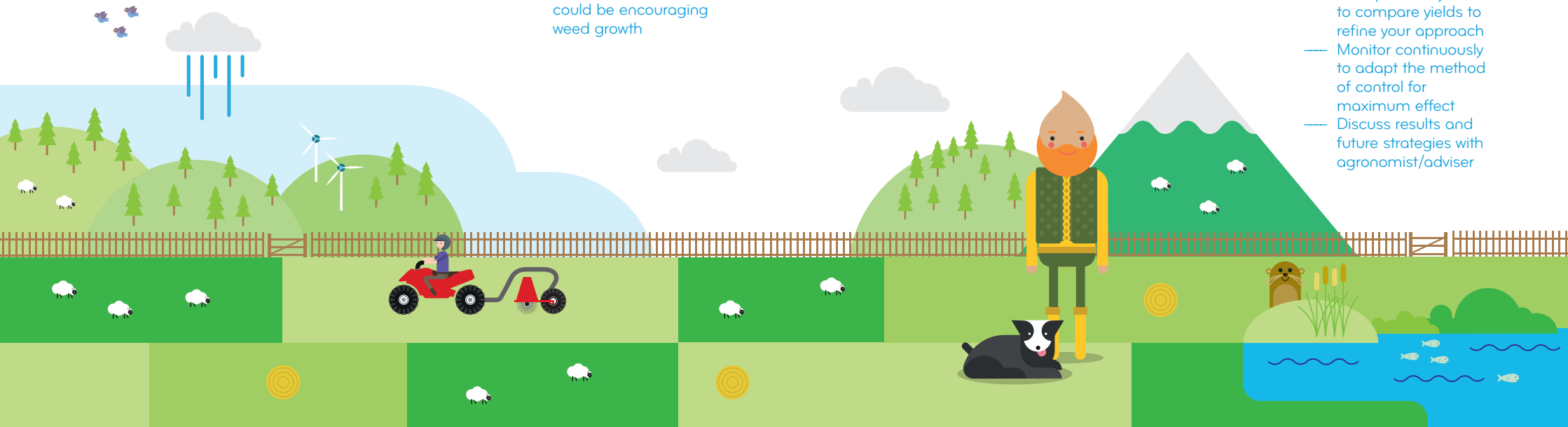
**Remember - Store SMART, Use SMART and Dispose SMART**

### 5 Did it work?

Recording and measuring the success of your approach will also help maximise the effectiveness of future weeds, pest and disease management and could reduce your reliance on pesticides. Getting advice from BASIS qualified advisers and Agronomists not only ensures you are doing the right thing for the environment but you can also learn from their experience.

#### Examples

- Use crop records from previous years to compare yields to refine your approach
- Monitor continuously to adapt the method of control for maximum effect
- Discuss results and future strategies with agronomist/adviser



Store **SMART**

- Only buy what you need
- Keep pesticides in a clearly marked lockable, bunded store at least 10m away from any watercourse or drain
- If possible, locate your store close to a filling area to avoid unnecessary transportation
- Keep pesticides in their original (clearly labelled) containers and legally dispose of any unwanted or out of date chemicals
- Store the equipment/sprayer itself under secure cover to protect from weather damage
- Ensure you have a spill kit located near the store and/or filling area to contain any spillages

Use **SMART**: On Yard

- Check application equipment is working correctly and has a valid National Sprayer Testing Scheme certificate
- Ensure operator is suitably trained, competent and has required protective clothing e.g. overalls, gloves, masks etc
- Carefully follow instructions on container for safety precautions, mixing and application
- Ideally, fill equipment in a covered, concrete bunded area where drainage can be contained. Alternatively, fill on grass using a drip tray or portable bund
- Use a bowser or separate storage tank and ensure water supply is connected via a double check valve. Never take water directly from mains, troughs, watercourses or ponds
- Never leave application equipment unattended when filling

Use **SMART**: In Field

- Carefully follow instructions for application. Do not over apply – this can wash off into drains or residues can stay in soils effecting the next crop grown
- Do not fill at the entrance of a field or any bare earth especially if adjacent to a watercourse, or a road/track which could channel run-off water into a watercourse
- Establish buffer strips adjacent to any ditches or watercourse
- Be aware – do not apply pesticide prior to rainfall or in windy conditions or when ground is frozen
- Use different application methods to target spraying e.g. knapsack, weed wiper instead of sprayer
- Plan your route through fields. Do not cross any ditches or streams to avoid accidents and prevent pollution

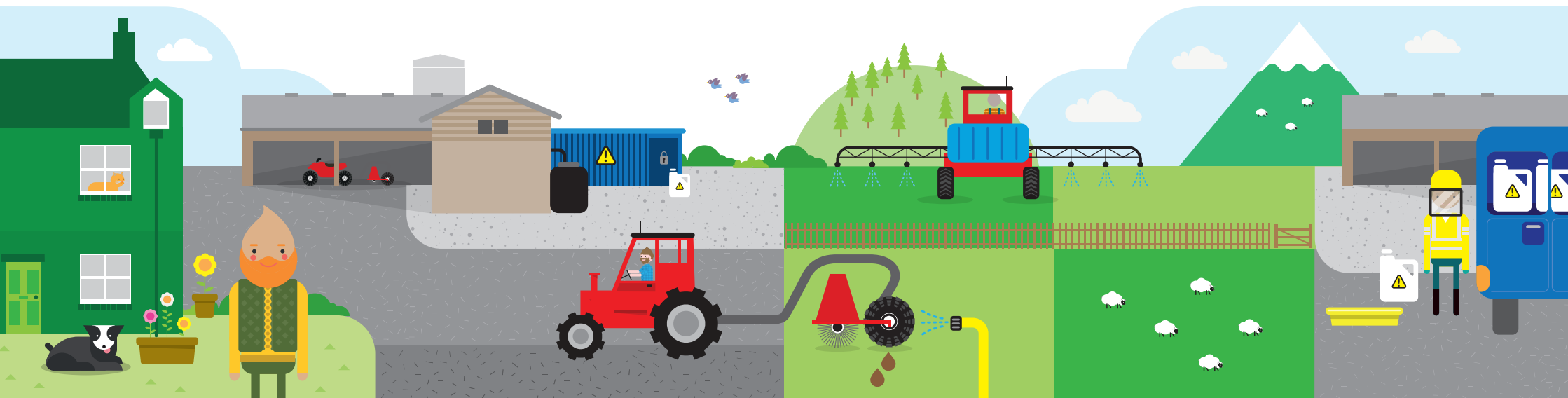
Dispose **SMART**

- Pressure wash or triple rinse containers until visibly clean and drain into induction bowl or into tank
- Wash the outside of the sprayer before leaving the field. Residue can be on the machine or in the mud on tyres
- Spray washings on to the crop or target area - be careful not to over apply
- Ensure all cleaning activities take place away from watercourses
- Return any unused pesticide to store. Alternatively, use a registered waste disposal company
- Record all applications

**Remember:** If in doubt, seek advice from a registered BASIS adviser. Or consider using a trained qualified contractor to apply pesticides.

Clean up any spills, splashes or foaming immediately. **NEVER wash spills into drains.**

**If pesticide has entered a watercourse, you should report it immediately to Natural Resources Wales on 0300 065 3000.**





## Using Contractors

Using a contractor can take the hassle out of using pesticides, BUT ensure the following first:

- Operators are suitably qualified and competent.
- The application equipment has a valid National Sprayer Testing Scheme certificate
- Any filling point used poses no risk to water
- Containers are cleaned and drained ready for disposal
- Agree who is responsible for disposal of leftover pesticide or used containers
- Accurate spray records are promptly supplied

**Remember:** If contractors are carrying out activities on your farm or land, you are responsible for meeting any regulations.

### For more information and advice:

#### Publications

- **Code of Practice for Plant Protection Products** (DEFRA)
- **The Code of Good Agricultural Practice for the Protection of Water, Soil and Air for Wales** (WG 2011)
- **Getting the most from your soil** (Natural Resources Wales and Hybu Cig Cymru (2015))
- **Tackling soil and sward conditions after a wet winter** (Farming Connect 2016)
- **Pest and Disease Control in Grass and Forage Crops** (Farming Connect 2013)

#### Organisations/Websites

- Welsh Water  
[www.dwrcymru.com/watersource](http://www.dwrcymru.com/watersource)
- Farming Connect  
[www.businesswales.gov.wales/farmingconnect](http://www.businesswales.gov.wales/farmingconnect)
- Voluntary Initiative (VI)  
[www.voluntaryinitiative.org.uk](http://www.voluntaryinitiative.org.uk)
- Health and Safety Executive (HSE)  
[www.hse.gov.uk](http://www.hse.gov.uk)
- National Sprayer Testing Scheme  
[www.nsts.org.uk](http://www.nsts.org.uk)