Labelling of plant protection products

ADVICE TO COMPANIES MANUFACTURING OR SELLING PLANT PROTECTION PRODUCTS
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ADVICE TO COMPANIES
MANUFACTURING OR
SELLING PLANT PROTECTION
PRODUCTS
Reg. no. 1234. Authorisation class 2L. For professional use only.

Authorised for control of fungal disease in the following crops:
- Autumn wheat, spring wheat, autumn barley, spring barley, oats, triticale and rye.
- Field beans.

Read accompanying instructions before use

Risk information
**WARNING**
Harmful if ingested. Very toxic to aquatic life with long lasting effects.

Safety instructions
Store locked up. Avoid inhaling dust/smoke/gas/mist/spray/vapours.
Wear protective glasses and clothing.
Do not contaminate water with the product or its container.
Do not clean application equipment near surface water.
To avoid the build-up of resistance do not apply this product or any other product containing Qo1 fungicides more than twice per season.

First aid
Call the SWEDISH POISONS INFORMATION CENTRE or a doctor if you feel unwell.

To avoid risks to human health and the environment, comply with the instructions for use.

Contents:
The product is a suspension concentrate (SC) containing 200 g/l (20 weight-%) stobstrobin.

Batch number: [123 456]

Empty packaging: Empty container must not be re-used. Treat this material and its container as hazardous waste.

Manufacturer/holder of authorisation
Company Co
Box 1, 123 45 TOWN, tel: 01-20 30 40

1 litre
Foreword

Sustainable production in agriculture is important in making it possible to protect the surrounding environment. Plant protection products are used in agriculture to prevent pest organisms and competing plants from causing yield and quality losses. However, hazardous chemical substances in the plant protection products may pose risks to humans and the environment. Rules are therefore required to reduce the risks, for example by preventing incorrect use.

Companies which manufacture or sell plant protection products have responsibility for passing on knowledge on appropriate handling to farmers and other users.

This brochure provides advice on how to design clear and easy-to-read labels and instructions for use. It is aimed at companies which manufacture or sell or import plant protection products into Sweden from another country outside the EU or EEA1 and which are consequently responsible for the labelling of plant protection products.

The information in the brochure covers plant protection products which are chemical products or biological plant protection products containing micro-organisms and which are covered by EU regulations.

Biological plant protection products consisting of macro-organisms such as nematodes (roundworm), insects or arachnids are covered by national regulations and are not included in this brochure.

1. European Economic Area (EEA).
Plant protection products

In order to protect human health and the environment there are rules stating that plant protection products must be authorised by the Swedish Chemicals Agency (KemI) before they may be sold or used in Sweden. KemI assesses what risks to health and the environment use of the plant protection product may entail and whether the product is sufficiently effective.

Even an authorised plant protection product may pose risks to health and the environment. To reduce the risks there are conditions of use, that is to say special rules to be followed by those who use the products. The conditions relate, for instance, to authorisation classes, exposure risks for the user, residue levels in foods, the impact on birds, mammals and aquatic organisms and leaching into areas including groundwater and surface water.

How are humans affected?

Plant protection products contain chemical substances which may be harmful to human health. The risks depend in part on the toxic properties of the substances and how people are exposed to them. People may be exposed to plant protection products in ways such as spillages and splashes on the skin, inhalation of spray liquid or accidental ingestion. Some plant protection products may only be used professionally by those who are authorised and have received training.

Any discussion of the danger of chemical substances makes a distinction between acutely hazardous and chronically hazardous substances. The latter are substances that cause harm as a result of long-term exposure. Examples of chronically hazardous substances are those that can cause cancer, affect the genetic material or interfere with reproduction. Chemical substances can also cause burns, skin irritation and allergies.

Plant protection product residues may occur in food products. To limit the risks these pose there are rules for residue limits. The National Food Administration is the authority that tests residue limits in foods.
How is the environment affected?

Several of the substances used in plant protection products are hazardous to the environment. This means that they may be difficult to degrade (persistent), can accumulate in living organisms or be directly toxic, for example, to aquatic organisms. Persistent substances accumulate in the environment over many years. Plant protection products may enter watercourses or the groundwater as a result of wind drift, evaporation, surface run-off or leaching into the soil. Residues of chemical substances are regularly encountered in surface water and groundwater. The aim is to reduce the unnecessary dispersal of plant protection products in the environment so that residue levels in surface water and groundwater are as low as possible.

EU-wide regulations should reduce the risks.

The EU is taking joint action to improve the regulations relating to plant protection products. An important aim is to reduce the quantity of hazardous chemical substances.

- The EU Regulation on Plant Protection Products\(^1\) means among other things that hazardous substances are to be replaced by less hazardous substances.
- The EU’s review programme for plant protection products has meant that substances of very high concern may not be used.
- A new directive for the sustainable use of pesticides\(^1\) has been adopted in the EU.
- There are two regulations for regulating jointly the classification, labelling and packaging of plant protection products\(^4\).

What can companies do?

Companies manufacturing or selling plant protection products are responsible, under current rules, for labelling them correctly. The rules on labelling are wide-ranging, including special requirements regarding how the information that reaches the user is to be formulated. The information shown on the label and in the associated instructions for use must provide information on what risks use of the products poses and how to protect oneself against unnecessary or harmful exposure. By designing labels and instructions for use in a clear and easy-to-read way, manufacturers and sellers of plant protection products can assist farmers and other users in reducing the risks in handling.

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Advice

to manufacturers and sellers of plant protection products

Make sure that the particulars are correct on labels and instructions for use.

Design the labels uniformly so that the farmer and other users can find important information quickly and easily.

Position the information which is most important at the start of the instructions for use.

Use a table format for the description of conditions of use so that the farmer and other users can follow the rules more easily.

Follow the main headings in the example instructions for use to make sure that the most important information is included.

Be clear about the distinction between rules and instructions in the instructions for use.
To illustrate how the above advice can be used, examples are given in the next section of a label and instructions for use. The examples represent templates on which the design of the labelling can be based.

Designing a label


Examples of details to appear on the packaging in accordance with Commission Regulation (EU) No 547/2011:

- Trade name or designation.
- Name and address of the authorisation holder and, if different, the name and address of the person responsible for the final packaging and labelling or for the final labelling of the product on the market.
- Registration number.
- Name and concentration of each active substance.
- Net quantity.
- Batch number and production date.
- First aid details.
- Information to the effect that the packaging must not be re-used by anyone other than the holder of the product authorisation and on condition that the packaging has been specifically designed in order to allow re-use by the authorisation holder.
- Particular risks posed to humans, animals or the environment, for example “Contact with vapours causes burns to skin and eyes and contact with liquid causes freezer burns”.
- Special phrases for the protection of humans, animals or the environment, for example: “Do not contaminate water with the product or its container. Do not clean application equipment near surface water” or “To protect bees and other pollinating insects, do not apply this product to crops when in flower”.
- Type of action (for example fungicide, insecticide or herbicide) and the mode of action.
- Type of preparation, for example suspension concentrate, granules or spray powder.
- Authorised use.
- Instructions on use and dosage.
- Where appropriate, a safety interval between each time of use.
- Details of possible phytotoxicity.
- The words “Read accompanying instructions before use”, if the product is accompanied by an information sheet on certain parts of the labelling.
• Instructions on appropriate storage conditions and final disposal of the plant protection product and packaging.
• Expiry date where necessary under normal storage conditions.
• The words “To avoid risks to human health and the environment, comply with the instructions for use”.
• User category allowed to use the plant protection product, if use is limited to certain categories.
• Classification and labelling in accordance with Regulation (EC) no 1272/2008 in the form of hazard pictograms, signal words, hazard statements and precautionary statements.

If there is insufficient space on the packaging, some of this information can be supplied on a separate information sheet which accompanies each pack. For further details, see Commission Regulation (EU) 547/2011.

Points to bear in mind in designing a label

• Place the name of the plant protection product at a prominent location on the label.
• The authorised area of use should be placed at the start of the label, but other conditions of use may be included in the instructions for use if there is insufficient space on the label.
• It is advisable to place risk information, safety instructions and first aid details in a frame to make the information clearer.
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- Autumn wheat, spring wheat, autumn barley, spring barley, oats, triticale and rye.
- Field beans.

Read accompanying instructions before use

Risk information

WARNING
Harmful if inhaled. Very toxic to aquatic life with long lasting effects.

Safety instructions

Store locked up. Avoid inhaling.
Use respiratory protective equipment.
Wear protective gloves and clothing.
Do not contaminate water with the product or its container.
Do not clean application equipment near surface water.
To avoid the build-up of resistance do not apply this product or any other product containing Qo1 fungicides more than twice per season.

First aid

Call the SWEDISH POISONS INFORMATION CENTRE or a doctor if you feel unwell.

To avoid risks to human health and the environment, comply with the instructions for use.

Contents: The product is a suspension concentrate (SC) containing 200 g/l (20 weight-%) stobstrobin.
Batch number: 123 456
Empty container: Empty container must not be re-used. Treat this material and its container as hazardous waste.

Manufacturer/holder of authorisation

Company Co
Box 1, 123 45 TOWN, tel: 01-20 30 40
Designing instructions for use

Instructions for use must contain all the important information needed for suitable handling. The instructions must be unique to each individual product. You should therefore avoid giving too much general information. Suggestions for the possible structuring of the instructions for use and for the contents most relevant for the farmer and other users:

- **Product facts** – details of the effect of the plant protection product, registration number, authorisation class, active substance etc.
- **Conditions of use** – description of the conditions of use that follow the authorisation of the plant protection product. There are rules which the user is obliged to follow, which should also be clearly apparent.
- **Restrictions** – information on special instructions in connection with use of the plant protection product. Direct or indirect harmful side-effects on plants or plant products etc. If there are no restrictions, this should also be apparent.
- **Instructions for use** – the following headings are proposed so that the user understands the function of the product as well as possible:

  **Mode of action**
  Description of how the product’s mode of action influences the objective of treatment. For example, preventive or curative effect, contact action or systemic action.

  **Risk of resistance**
  Information on whether there is a risk of resistance and a strategy for avoiding this. If the resistance is severe this can also be stated on the label under “Safety instructions”.

  **Optimal conditions for action**
  Information on whether the treatment is affected by wind, precipitation, temperature, air humidity etc and how the user can carry out the most effective treatment. State also degree of water resistance.

  **Dose, quantity of water and time of treatment**
  Instructions on which dose is to be used, which quantity of water is appropriate to use, and when treatment is to take place with respect to pressure of infection to provide optimum treatment.

  **Spreading technique**
  Details on which application equipment is needed and recommended tractor speed, quantity of water, pressure, spray quality and boom height. In cases where there are conditions for use of drift-reduced spraying equipment, this can also be made apparent here. Refer in the instructions for use to the brochure “Hjälpreda vid bestämning av anpassade skyddsavstånd - Lantbrukspruta med bom” and/or ”Hjälpreda vid bestämning av anpassade skyddsavstånd – Fläktspruta i fruktodling”. These brochures can be downloaded from www.sakertvaxtskydd.se.
Protective equipment
Description of which personal protective equipment to wear for the various operations such as the filling, treatment and cleaning of equipment with regard to which type of equipment is used, for example an agricultural sprayer or backpack sprayer.
- Respiratory protection (suitable face mask and filter).
- Hand protection (type of material).
- Eye protection (goggles or visor).
- Skin protection (apron, protective shoes or protective suit).

Mixtures
Instructions if the product is physically miscible with other plant protection products.

Preparation of spray liquid
Information on how the agricultural sprayer, backpack sprayer etc is to be safely filled.

Cleaning of application equipment
Instructions on how application equipment is to be safely cleaned.

Empty packaging
Information on the management of residues and spillages of the plant protection product and empty packaging; state whether the residual products can be recycled or whether they have to be treated as hazardous waste.

Storage
Description of what is specific to the product, for example storage away from frost.
# STOB Fungicide

## Product Facts

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product action</td>
<td>Fungicide</td>
</tr>
<tr>
<td>Registration number</td>
<td>1234</td>
</tr>
<tr>
<td>Authorisation class</td>
<td>1L</td>
</tr>
<tr>
<td>Formulation</td>
<td>Suspension concentrate (SC)</td>
</tr>
<tr>
<td>Active substance</td>
<td>200 g/l (20 weight-%) stobstrobin</td>
</tr>
<tr>
<td>Pack</td>
<td>1 litre</td>
</tr>
</tbody>
</table>

## Conditions of Use

Special conditions must be observed in the use of plant protection products. The conditions are stated in the Swedish Chemical Agency’s authorisation of the product and are based on the risks posed by the product to health and the environment and good agricultural practice.

### Crop Pest Permitted Treatment

<table>
<thead>
<tr>
<th>Crop</th>
<th>Pest</th>
<th>Permitted treatment</th>
<th>Dose max l/ha</th>
<th>Spreading method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autumn wheat</td>
<td>Fungal</td>
<td>DC 30–60</td>
<td>1.0</td>
<td>Boom sprayer</td>
</tr>
<tr>
<td>Spring wheat</td>
<td>Fungal</td>
<td>DC 30–60</td>
<td>1.0</td>
<td>Boom sprayer</td>
</tr>
<tr>
<td>Autumn barley</td>
<td>Fungal</td>
<td>DC 30–60</td>
<td>1.0</td>
<td>Boom sprayer</td>
</tr>
<tr>
<td>Spring barley</td>
<td>Fungal</td>
<td>DC 30–60</td>
<td>1.0</td>
<td>Boom sprayer</td>
</tr>
<tr>
<td>Oats</td>
<td>Fungal</td>
<td>DC 33–61</td>
<td>0.5</td>
<td>Boom sprayer</td>
</tr>
<tr>
<td>Triticale</td>
<td>Fungal</td>
<td>DC 32–61</td>
<td>1.0</td>
<td>Boom sprayer</td>
</tr>
<tr>
<td>Rye</td>
<td>Fungal</td>
<td>DC 32–61</td>
<td>0.5</td>
<td>Boom sprayer</td>
</tr>
<tr>
<td>Field beans</td>
<td>Fungal</td>
<td>DC 51–65</td>
<td>0.5</td>
<td>Boom sprayer</td>
</tr>
</tbody>
</table>

*Treatment must not take place less than 14 days prior to harvesting of fresh beans with pods, 35 days prior to harvesting of dried beans.

### Other Conditions

- To limit the risks to aquatic organisms, the instructions contained in the Swedish guide “Hjälpreda för bestämning av vindenpassat skyddsavstånd vid användning av lantbrukspruta med bom” relating to the Swedish Environmental Protection Agency Regulations on the Application of Chemical Pesticides (NFS 2015:2) must be observed.
Note that conditions of use and other conditions are statutory requirements and must be complied with by the person using the product.

**Restrictions**
Stob, used in the recommended quantity, has not shown any harmful effects in trials with cereals. There are no restrictions regarding resowing or subsequent crop.

**Instructions for use**

*Mode of action*
Stob acts systemically (it is carried through the sap flows) in the plant but also has a translaminar (leaf-penetrating) effect. The product is principally used for preventive purposes. The best effect is achieved in direct treatment, that is to say when the first attacks become visible on the plant. After treatment the plant is protected against fungal attack for 4–6 weeks.

*Risk of resistance*
Resistance is shown by poor or inadequate effect of treatment. Stob contains the active substance strobtrobin, which belongs to the group of Qo1 fungicides (strobilurins). Resistance to strobilurins has been identified in cereals where wheat is attacked by mildew and leaf blotch.

Avoid resistance by:
- Using Stob together with other fungicides which do not belong to the Qo1 group.
- Using Stob preventively or as early as possible when signs of attack appear.
- Use a maximum of two treatments of Stob per year.

*Optimal conditions for action*
Treatment should take place when the level of fungal attack is low and the crop is growing well. For optimal action, Stob should be used when the temperature is 15–18 degrees and the air humidity is over 70 per cent. Avoid treating in extreme weather conditions, for example during a drought or in high temperatures (>25 degrees). Stob is rainproof one hour after treatment on dry leaves and in dry weather.
**Dose, quantity of water and time of treatment**

Follow the instructions in the table below. Check the effect of the treatment by leaving an untreated area of at least 25 square metres in the field.

<table>
<thead>
<tr>
<th>Crop</th>
<th>Pest</th>
<th>Dose l/ha</th>
<th>Water quantity l/ha</th>
<th>Time dev. stage</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Autumn wheat/spring wheat</strong></td>
<td>Leaf blotch</td>
<td>1.0 l/ha or (2x0.5)</td>
<td>200–300</td>
<td>DC 47–59, DC 47–55</td>
<td>If there is heavy infection pressure two treatments may be needed.</td>
</tr>
<tr>
<td></td>
<td>Leaf spot</td>
<td></td>
<td></td>
<td>DC 47–55, DC 47–55</td>
<td>If so, use a dose of 0.5 l/ha at an interval of 21–30 days.</td>
</tr>
<tr>
<td></td>
<td>Brown rust</td>
<td></td>
<td></td>
<td>DC 47–55, DC 47–55</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yellow rust</td>
<td></td>
<td></td>
<td>DC 47–55, DC 47–55</td>
<td></td>
</tr>
<tr>
<td><strong>Autumn barley/spring barley</strong></td>
<td>Leaf spot</td>
<td>1.0 l/ha or (2x0.5)</td>
<td>200–300</td>
<td>DC 37–39, DC 37–39</td>
<td>In the event of early and heavy attacks it is appropriate to treat twice.</td>
</tr>
<tr>
<td></td>
<td>Leaf blotch</td>
<td></td>
<td></td>
<td>DC 37–39, DC 37–39</td>
<td>If doing so, use a lower dose of 0.5 l/ha at an interval of 21–30 days.</td>
</tr>
<tr>
<td></td>
<td>Barley brown rust</td>
<td></td>
<td></td>
<td>DC 30–59, DC 30–59</td>
<td>The first treatment is done in DC 31–32 and the second in DC 45–47.</td>
</tr>
<tr>
<td><strong>Oats</strong></td>
<td>Leaf spot</td>
<td>0.5 l/ha</td>
<td>200–300</td>
<td>DC 37–59, DC 37–59</td>
<td>Max 1 treatment</td>
</tr>
<tr>
<td></td>
<td>Brown spot</td>
<td></td>
<td></td>
<td>DC 37–59, DC 37–59</td>
<td></td>
</tr>
<tr>
<td><strong>Triticale</strong></td>
<td>Leaf spot</td>
<td>1.0 l/ha or (2x0.5)</td>
<td>200–300</td>
<td>DC 37–55, DC 37–55</td>
<td>In the event of early and heavy attacks it is appropriate to treat twice.</td>
</tr>
<tr>
<td></td>
<td>Leaf blotch</td>
<td></td>
<td></td>
<td>DC 37–55, DC 37–55</td>
<td>If doing so, use a lower dose of 0.5 l/ha at an interval of 21–30 days.</td>
</tr>
<tr>
<td></td>
<td>Leaf blotch</td>
<td></td>
<td></td>
<td>DC 37–55, DC 37–55</td>
<td>The first treatment is done in DC 31–32 and the second in DC 45–47.</td>
</tr>
<tr>
<td><strong>Rye</strong></td>
<td>Leaf blotch</td>
<td>0.5 l/ha</td>
<td>200–300</td>
<td>DC 37–49, DC 37–49</td>
<td>Max one treatment</td>
</tr>
<tr>
<td></td>
<td>Leaf spot</td>
<td></td>
<td></td>
<td>DC 37–49, DC 37–49</td>
<td></td>
</tr>
<tr>
<td><strong>Field beans</strong></td>
<td>Anthracnose</td>
<td>0.5 l/ha</td>
<td>200–300</td>
<td>–</td>
<td>A suitable time for treatment is when the crop begins to flower. Max one treatment.</td>
</tr>
<tr>
<td></td>
<td>Chocolate spot</td>
<td></td>
<td></td>
<td>–</td>
<td></td>
</tr>
</tbody>
</table>
**Spreading technique**

When using Stob it is important that the spray liquid covers all parts of the crop. If growth is vigorous a larger quantity of liquid should be used to provide better coverage. A lower tractor speed also results in better coverage, as well as larger nozzles that provide an increased quantity of liquid.

Examples of spreaders:

<table>
<thead>
<tr>
<th>Spreader</th>
<th>ISO 110–025 (purple)</th>
<th>ISO 110–03 (blue)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tractor speed</td>
<td>7.5 km/h</td>
<td>7.0 km/h</td>
</tr>
<tr>
<td>Quantity of water</td>
<td>200 litres</td>
<td>300 litres</td>
</tr>
<tr>
<td>Pressure</td>
<td>2.6 bar</td>
<td>2.8 bar</td>
</tr>
<tr>
<td>Shower quality</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Boom height above crop</td>
<td>40–50 cm</td>
<td>40–50 cm</td>
</tr>
</tbody>
</table>

Spraying must take place under conditions which do not lead to wind drift. Follow the recommendation in the brochure “Hjälpreda för bestämning av vindanpassat skyddsavstånd vid användning av lantbruksspruta med bom”.

The sprayer must be tested and correctly calibrated to obtain best results.

**Protective equipment**

The following protective equipment must be used when filling and cleaning the agricultural sprayer:
- Half-mask with particle filter P2.
- Safety gloves (inner glove of latex and outer glove of nitrile rubber).
- Visor.
- Protective overalls and protective boots

Follow general hygiene measures by:
- Avoiding contact with skin, eyes and clothes.
- Refraining from eating, drinking, smoking or taking snuff at the workplace.
- Removing contaminated clothes.
- Keeping protective equipment separate.
- Washing hands before breaks.
- Showering and washing all clothes at the end of the shift.

**Mixtures**

Stob can be mixed with other plant protection products without chemical precipitations being formed.
**Preparation of spray liquid**

When filling tank:
- Half-fill with water.
- Follow the recommended dose according to the table.
- Pour the measured dose into the half-filled tank.
- Add any other products and the remainder of the water while stirring.

The spray liquid must be stirred in transport and during spraying. When the spray liquid is being prepared no liquid should leach into drains, rivers or water sources. Use a biobed or a slab with collection.

**Cleaning of application equipment**

Clean the application equipment both externally and internally.

Start with internal cleaning of the sprayer:
1. Empty the sprayer.
2. Then add a third of the contents of the rinsing water tank and rinse the sprayer.
3. Spray the used rinsing water out on to the crop.
4. Refill with another third of the water.
5. Add suitable cleaning product to the second rinsing.
6. Circulate the product and the water in the system and spread out.
7. Refill with the last third of the water.
8. Circulate the liquid in the system and spread out.

Continue with external cleaning of sprayer and tractor. Clean application equipment immediately after use to reduce the risk of left-over residues of other products. Products not intended to be used for certain crops may cause damage and reduced yields.

**Empty packaging**

Empty container must not be re-used. Product residues and used packaging are hazardous waste and must be sent for destruction. Contact the local authority environmental and health protection department for information on waste management.

**Storage**

Store the product in a dry and cool place away from frost in order to maintain its stability as well as possible.
Further information

The Swedish Chemicals Agency is responsible among other things for the authorisation of plant protection products and rules on classification, labelling and packaging. Read more on the Swedish Chemicals Agency website: www.kemikalieinspektionen.se

The Swedish Environmental Protection Agency is responsible among other things for reducing the impact on the natural environment of the use and application of plant protection products as well as waste issues. Read more on the Swedish Environmental Protection Agency website: www.naturvardsverket.se

The Swedish Board of Agriculture’s crop protection centres offer advice on weeds, fungal diseases, pests etc. Read more on the Swedish Board of Agriculture website: www.jordbruksverket.se

The National Food Administration is responsible for food safety and among other things checks limits for pesticide residues in foods. Read more on the National Food Administration website: www.livsmedelsverket.se

The Swedish Work Environment Authority works for the right to healthy, safe and stimulating working conditions when handling plant protection products among other things. Read more on the Swedish Work Environment Authority website: www.arbetsmiljoverket.se

The Swedish Crop Protection Association is an industry organisation which works to ensure safe use of plant protection products. Read more on the Swedish Crop Protection Association website: www.svensktvaxtskydd.se

Säkert växtskydd (Focus on Pesticide Use) is an information and training campaign aimed at improving the management of plant protection products in Swedish agriculture. Read more on the Focus on Pesticide Use website: www.sakertvaxtskydd.se