Use: A broad spectrum fungicide with curative and protectant activity for the control of disease on winter wheat, winter barley, spring barley, oilseed rape, peas, field beans and lupins.

Formulation: A soluble concentrate containing 90 g/litre (8.6%w/w) metconazole.

Pack Size: 5 litres in outers of four.

LERAP: Not required.

Recommended Crops: Winter wheat, winter barley, spring barley, oilseed rape, peas, field beans and lupins.

Recommended Rate:
- Oilseed rape, peas, field beans and lupins: 0.8 litres per hectare.
- Winter wheat, winter barley and spring barley: 1 litre per hectare.

Maximum Total Dose:
- Oilseed rape, peas, field beans and lupins: 1.6 litres per hectare.
- Winter wheat, winter barley and spring barley: 2 litres per hectare.

Water Volume: 200-400 litres per hectare. (The higher volume should be used to improve the penetration of spray into dense crops).

Spray Quality: FINE or MEDIUM

Latest Time of Application:
- Oilseed rape: 10% of pods at final size.
- Peas, field beans and lupins: 14 days before harvest.
- Winter wheat, winter barley and spring barley: Up to and including GS 71 (caryopsis watery ripe stage).

Processed Crops: Consult processors before use.

Aerial Application: No

Compatibility: For details of compatibilities contact your distributor, local BASF representative, the BASF Technical Services Hotline: 0845 602 2553 or visit our website on: www.agriCentre.basf.co.uk

Major changes since last printing: None.

This product label is compliant with the CPA Voluntary Initiative Guidance.
DIRECTIONS FOR USE

IMPORTANT: This information is approved as part of the Product Label. All instructions within this section must be read carefully in order to obtain safe and successful use of this product.

Sunorg Pro/Caramba 90/Juventus is a broad spectrum fungicide with curative and protectant activity, which can be used on all commercial varieties of winter wheat, winter barley, spring barley and oilseed rape. Sunorg Pro/Caramba 90/Juventus can also be used on field beans, combining and vining peas and lupins.

1. RESTRICTIONS/WARNINGS

**DO NOT** apply to oilseed rape crops that are damaged or stressed from factors such as previous product use, adverse weather conditions (e.g. drought, frost or waterlogging), nutrient deficiency or pest attacks.

Sunorg Pro/Caramba 90/Juventus is formulated specifically for use on cereals, oilseed rape and legumes. The addition of further adjuvants is not advised.

Sunorg Pro/Caramba 90/Juventus should **NOT** be applied with pyrethroids to flowering oilseed rape.

Ensure sprayer is free from previous chemical residues that may harm the crop. Use of a detergent cleaner is advised before and after use.

Consult processors before using on peas grown for processing.

2. DISEASE CONTROL

Sunorg Pro/Caramba 90/Juventus controls *Septoria tritici*, yellow and brown rust on winter wheat; powdery mildew on winter barley; brown rust and *Rhynchosporium* on winter and spring barley, and gives moderate control of powdery mildew on winter wheat and spring barley, and reduction of net blotch on barley and *Fusarium* species on winter wheat.

2.1 Winter wheat

<table>
<thead>
<tr>
<th>Disease</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Septoria tritici</em> (Leaf blotch)</td>
<td>Sunorg Pro/Caramba 90/Juventus controls <em>Septoria tritici</em>. To prevent visible symptoms developing on the second leaf and flag leaf, treatment should be made before second node detectable stage, and when weather favouring disease development* has occurred. If conditions continue to favour disease development a follow-up treatment may be necessary. *10 mm or more of rain in up to 3 consecutive days, i.e. days with 1 mm or more of rain. Where stem elongation is incomplete or crops are thin or stunted, 5 mm of rain in one day may be sufficient to trigger disease development.</td>
</tr>
<tr>
<td>Powdery mildew</td>
<td>Sunorg Pro/Caramba 90/Juventus applied at an early stage of mildew development (not more than 3% infection on any green leaf) will give moderate control of this disease. Where mildew has become established, the use of a specific mildewicide will improve control and help prevent the development of resistant strains of mildew.</td>
</tr>
<tr>
<td>Yellow rust</td>
<td>For optimum results, apply Sunorg Pro/Caramba 90/Juventus before any leaf has more than 1% infection or as a preventative treatment on susceptible varieties after the flag leaf has fully emerged (GS Z39).</td>
</tr>
<tr>
<td>Brown rust</td>
<td>Treat susceptible varieties (NIAB rating 5 or less) as soon as brown rust is seen. Spray more resistant varieties before any of the top three leaves have more than 1-2% infection.</td>
</tr>
<tr>
<td><em>Fusarium</em> (Ear blight)</td>
<td>When applied to control other diseases (i.e. rusts and <em>Septoria tritici</em>) between full ear emergence and anthesis complete (GS Z69), Sunorg Pro/Caramba 90/Juventus provides a reduction of <em>Fusarium</em> species.</td>
</tr>
</tbody>
</table>
### 2.2 Winter and spring barley

<table>
<thead>
<tr>
<th>Disease</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powdery mildew</td>
<td>Sunorg Pro/Caramba 90/Juventus applied at an early stage of mildew development (not more than 3% infection on any green leaf) will give control of this disease in winter barley, and moderate control in spring barley. Where mildew has become established, the use of a specific mildewicide will improve control and help prevent the development of resistant strains of mildew.</td>
</tr>
<tr>
<td>Brown rust</td>
<td>Treat susceptible varieties (NIAB rating 5 or less) as soon as brown rust is seen. Spray more resistant varieties before any of the top three leaves have more than 1-2% infection.</td>
</tr>
<tr>
<td>Rhynchosporium (Leaf blotch)</td>
<td>Favoured by cool (10-15°C) and wet weather conditions, <em>Rhynchosporium</em> is best controlled by Sunorg Pro/Caramba 90/Juventus when the disease can be found on the youngest leaves.</td>
</tr>
<tr>
<td>Net blotch</td>
<td>Where used to control other diseases, Sunorg Pro/Caramba 90/Juventus will give a useful reduction of net blotch. Spray as soon as the disease is seen on any of the top three leaves. A further treatment will be necessary where disease is well established.</td>
</tr>
</tbody>
</table>

### 2.3 Oilseed rape

Sunorg Pro/Caramba 90/Juventus controls *Alternaria* and gives a reduction of *Phoma lingam* and light leaf spot in oilseed rape.

<table>
<thead>
<tr>
<th>Disease</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Alternaria</em></td>
<td>Sunorg Pro/Caramba 90/Juventus should be applied as soon as disease begins to develop in the crop.</td>
</tr>
<tr>
<td><em>Phoma lingam</em> (Foliar)</td>
<td>Sunorg Pro/Caramba 90/Juventus should be applied as soon as disease begins to develop in the crop.</td>
</tr>
<tr>
<td>Light leaf spot</td>
<td>Apply Sunorg Pro/Caramba 90/Juventus at the first signs of disease for useful reduction of light leaf spot.</td>
</tr>
</tbody>
</table>

When applied in the spring, Sunorg Pro/Caramba 90/Juventus can reduce the height of the crop.

### 2.4 Combining and vining peas

Sunorg Pro/Caramba 90/Juventus can be used for the reduction of *Ascochyta* and *Mycosphaerella* species, the reduction of *Botrytis* and the control of rust on peas.

<table>
<thead>
<tr>
<th>Disease</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Mycosphaerella</em> and <em>Ascochyta</em></td>
<td>Apply Sunorg Pro/Caramba 90/Juventus at the start of flowering and repeat 3-4 weeks later if required, for the reduction of <em>Ascochyta</em> and <em>Mycosphaerella</em>.</td>
</tr>
<tr>
<td><em>Botrytis</em></td>
<td>For the reduction of <em>Botrytis</em>, apply Sunorg Pro/Caramba 90/Juventus at mid flowering and repeat 3-4 weeks later if required.</td>
</tr>
<tr>
<td>Rust</td>
<td>For rust control, apply Sunorg Pro/Caramba 90/Juventus at the first sign of rust pustules and repeat 3-4 weeks later if required.</td>
</tr>
</tbody>
</table>

### 2.5 Field beans

Sunorg Pro/Caramba 90/Juventus can be used for control of rust on beans.

<table>
<thead>
<tr>
<th>Disease</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rust</td>
<td>For rust control, apply Sunorg Pro/Caramba 90/Juventus at the start of petal fall and repeat 3-4 weeks later if required.</td>
</tr>
</tbody>
</table>
2.6 Lupins

Qualified Minor Use Recommendations:

Sunorg Pro/Caramba 90/Juventus can be used for the reduction of *Ascochyta* and *Mycosphaerella* species, the reduction of *Botrytis* and the control of rust in lupins.

<table>
<thead>
<tr>
<th>Disease</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Ascochyta</em></td>
<td>Apply Sunorg Pro/Caramba 90/Juventus at the start of petal fall and repeat 3-4 weeks later if required, for the reduction of <em>Ascochyta</em>.</td>
</tr>
<tr>
<td><em>Botrytis</em></td>
<td>For the reduction of <em>Botrytis</em>, apply Sunorg Pro/Caramba 90/Juventus at the start of petal fall and repeat 3-4 weeks later if required.</td>
</tr>
<tr>
<td><em>Rust</em></td>
<td>For rust control, apply Sunorg Pro/Caramba 90/Juventus at the start of petal fall and repeat 3-4 weeks later if required.</td>
</tr>
</tbody>
</table>

2.7 Resistance Management

Sunorg Pro/Caramba 90/Juventus contains metconazole, a DMI fungicide. Resistance to some DMI fungicides has been identified in *Septoria* leaf blotch (*Mycosphaerella graminicola*) which may seriously affect the performance of some products. For further advice on resistance management in DMIs contact your agronomist or specialist advisor and visit the FRAG-UK website.

For crop/pathogen situations where repeated spray applications are required, alternation or mixtures with an effective non cross-resistant fungicide are recommended. Fungicide use does not replace the need for resistant crop varieties, good agronomic practice, plant hygiene, etc.

3. CROPS

All varieties of winter wheat, winter and spring barley, oilseed rape, peas and field beans may be treated but safety to lupins has not been established. If possible, a small area of the lupin crop should be treated before treating the whole crop.

3.1 Winter wheat, winter barley, spring barley

**Time of Application**

Apply as soon as diseases start to develop in the crop and repeat as required.

**Rate of Application**

1.0 l/ha.

3.2 Oilseed rape

**Time of Application**

Apply as soon as diseases start to develop, and repeat as required.

**Rate of Application**

0.8 l/ha.

3.3 Combining and vining peas

All varieties of peas may be treated.

**Time of Application**

Apply Sunorg Pro/Caramba 90/Juventus at the start of flowering and repeat 3-4 weeks later if required, for the reduction of *Ascochyta* and *Mycosphaerella*. For the reduction of *Botrytis*, apply Sunorg Pro/Caramba 90/Juventus at mid flowering and repeat 3-4 weeks later if required. For rust control, apply Sunorg Pro/Caramba 90/Juventus at the first sign of rust pustules and repeat 3-4 weeks later if required.

**Rate of Application**

0.8 l/ha.
3.4 Field beans and lupins
All varieties of field beans may be treated but safety to lupins has not been established. If possible, a small area of the lupin crop should be treated before treating the whole crop.

Time of Application
Apply Sunorg Pro/Caramba 90/Juventus at the start of petal fall and repeat 3-4 weeks later if required.

Rate of Application
0.8 l/ha.

4. FOLLOWING CROPS
After treating a cereal, oilseed rape or legume crop with Sunorg Pro/Caramba 90/Juventus cereals, oilseed rape, sugar beet, linseed, maize, clover, beans, peas, carrots, potatoes and onions may be sown as the following crop. The effects of Sunorg Pro/Caramba 90/Juventus on other crops has not been assessed.

5. MIXING AND SPRAYING
Apply Sunorg Pro/Caramba 90/Juventus in 200-400 litres water per hectare. The higher volume should be used to improve the penetration of spray into dense crops.
Good spray cover of the target is essential.
Three quarters fi ll the tank with clean water and commence agitation.
Add the required quantity of Sunorg Pro/Caramba 90/Juventus and then any other tank-mix products. Fill the tank. Maintain agitation during mixing and spraying.
Sprayers should be thoroughly cleaned out immediately after use.
Spray quality: FINE or MEDIUM (BCPC Definition) within the following range: F110/1.2 to 1.6/3.0
Set the boom height so that the spray from alternate nozzles just overlaps above the target.
Travel at 6-8 km/h for tractor mounted or trailed sprayers.

6. CONTAINER AND STORAGE
Sunorg Pro/Caramba 90/Juventus is supplied in 5 litre containers and should be kept dry and frostproof in a suitable pesticide store.
7. SAFETY PRECAUTIONS

Operator protection

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:

WEAR SUITABLE PROTECTIVE GLOVES AND FACE PROTECTION (FACESHIELD) when handling the concentrate.

WEAR SUITABLE PROTECTIVE GLOVES when handling contaminated surfaces.

However, engineering controls may replace personal protective equipment if a COSHH assessment shows that they provide an equal or higher standard of protection.

WASH ALL PROTECTIVE CLOTHING thoroughly after use, especially the insides of gloves.

WASH HANDS before meals and after work.

Environmental protection

Do not contaminate surface waters or ditches with chemical or used container.

Storage and disposal

DO NOT RE-USE CONTAINER for any purpose.

STORE IN ORIGINAL CONTAINER, tightly closed, in a safe place.

WASH OUT CONTAINER THOROUGHLY and dispose of safely.

TRIPLE RINSING ENSURES A CLEAN BOTTLE.

PROTECT FROM FROST.

DO NOT STORE IN DIRECT SUNLIGHT.

8. DPD REGULATIONS (CHIP 3)

Sunorg Pro®/Caramba®90/Juventus®

A soluble concentrate containing 90 g/litre metconazole and diethylene glycol.

IRRITATING TO EYES.

POSSIBLE RISK OF HARM TO THE UNBORN CHILD.

TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

KEEP OUT OF REACH OF CHILDREN.

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDINGSTUFFS.

WHEN USING DO NOT EAT, DRINK OR SMOKE.

THIS MATERIAL AND ITS CONTAINER MUST BE DISPOSED OF IN A SAFE WAY.

USE APPROPRIATE CONTAINMENT TO AVOID ENVIRONMENTAL CONTAMINATION.

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

This product is approved under the Control of Pesticides Regulations 1986.
9. IMPORTANT INFORMATION

<table>
<thead>
<tr>
<th>Crop</th>
<th>Maximum Individual Dose</th>
<th>Maximum Total Dose Per Crop</th>
<th>Latest Time of Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter wheat, winter barley, spring barley</td>
<td>1 litre product/ha</td>
<td>2 litres product/ha</td>
<td>Up to and including GS 71. (caryopsis watery ripe stage)</td>
</tr>
<tr>
<td>Oilseed rape</td>
<td>0.8 litres product/ha</td>
<td>1.6 litres product/ha</td>
<td>10% of pods at final size</td>
</tr>
<tr>
<td>Combining peas, vining peas, field beans and lupins</td>
<td>0.8 litres product/ha</td>
<td>1.6 litres product/ha</td>
<td>14 days before harvest</td>
</tr>
</tbody>
</table>

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.

(Sunorg Pro MAPP No. 11112)
(Caramba 90 MAPP No. 12655)
(Juventus MAPP No. 13340)