



**DOVE**  
**ASSOCIATES**

**Horticultural Consultants**

Weggs Farm

Common Road

Dickleburgh, DISS

Norfolk IP21 4PJ

Tel: 01379 741200

Fax: 01379 741800

Email: [info@dovebugs.co.uk](mailto:info@dovebugs.co.uk)

[www.dovebugs.co.uk](http://www.dovebugs.co.uk)

## Adjuvants

Adjuvants are a group of substances that can be added to the spray tank to modify a pesticide and/or spray mixture's performance. If there are application issues with the equipment or product, then adjuvants can help to overcome these, providing enhanced efficacy. Although adjuvants are not classed as pesticides, they need to be registered with CRD because they are modified chemicals.

Adjuvants can minimise or eliminate issues with pesticides such as incompatibility, instability, foaming, drift, evaporation, volatilisation, degradation, adherence, penetration, surface tension and coverage. They are designed to perform functions such as wetting, sticking, spreading, emulsifying, buffering and dispersing.

Always check the pesticide label before using an adjuvant. Some products may already have them incorporated into their final solution e.g. emulsifiable concentrates. Other pesticides can have restrictions on what can be used, sometimes for reasons such as risk to the environment or to the crop.

There are a range of different adjuvants available to improve the action of pesticides. The following information provides details on some of the key products currently in use. Other products are available.

### **Activator 90**

Supplier: De Sangosse Ltd

- Non-ionic wetting agent
- 750g/l alcohol ethoxylates and 150g/l natural fatty acids
- Emulsifiable concentrate
- Adj No: A0543

Use with all approved pesticides on:

1. All edible crops when used at half their recommended dose or less.
2. All non-edible crops up to their full recommended dose.

Also at a maximum concentration of 0.1% with approved pesticides on listed crops up to specified growth stages.

**Use plant protection products safely. Always read the label and product information before use**

Dove Associates shall in no event be liable for any loss or damage caused by the use of products mentioned in this document

© Dove Associates 19/12/11

## **Codacide Oil**

Supplier: Microcide Ltd

- 95% emulsified vegetable oil
- Adj No: A0629

The minimum dosage of Codacide Oil is 2.5 lt/ha. If the total rate of plant protection product exceeds 2.5 lt/ha or 2 kg/ha, then the same rate of Codacide Oil must be used i.e. 2.5 lt/ha of product A and 1.5 kg/ha of product B = 4.0 lt/ha of Codacide Oil.

Do not use Codacide with the active ingredient captan. Do not apply with pesticides in periods of high temperature or high light intensity or if either of these situations is forecast.

## **Cropspray 11-E**

Supplier: De Sangosse Ltd

- Adjuvant
- 99% highly refined paraffinic oil
- Adj No: A0537

Use with all approved pesticides on:

1. All edible crops when used at half their recommended dose or less.
2. All non-edible crops up to their full recommended dose.

Also with listed herbicides (MCPB, 2,4-D, Roundup, phenmedipham and Goltix WG) on a range of specified crops and with all pesticides on a range of specified crops up to specified growth stages.

Do not use in tank mixes with bifenox, chlorothalonil or sulphur. Avoid using if frost is predicted before or after application.

## **Headland Rhino**

Supplier: Headland

- A trisiloxane wetting agent
- 85% w/w polyalkylene oxide modified heptamethyl siloxane
- Adj No. A0328

Use with any herbicide, systemic fungicide, systemic insecticide or plant growth regulator.

Particularly useful when mixed with glyphosate; it reduces drying time and improves control of broad-leaved weeds. Do not use with any pesticide applied in or near water. Use Headland Rhino at a concentration of 0.1% of total spray volume e.g. 100 ml per 100 litres of water.

## **Li-700**

Supplier: De Sangosse Ltd

- Acidifier; drift retardant; penetrant
- 35% w/w lecithin, 35% propionic acid and 9.39% w/w alcohol ethoxylate
- Emulsifiable concentrate
- Adj No: A0529

Use with all approved pesticides on:

1. All edible crops when used at half their recommended dose or less.
2. All non-edible crops up to their full recommended dose.

Also, with morpholine fungicides on cereals and with pirimicarb on legumes when used at full dose, with iprodione on Brassicas when used at 75% dose and at a maximum concentration of 0.5% with all pesticides on listed crops at full dose up to specified growth stages.

**Use plant protection products safely. Always read the label and product information before use**

Dove Associates shall in no event be liable for any loss or damage caused by the use of products mentioned in this document

© Dove Associates 19/12/11

<b>Spray volume (lt/ha)</b>	<b>0.5 % Li-700 standard rate</b>	<b>0.25 % for glyphosate only</b>
70	350ml	175ml
100	500ml	250ml
200	1000ml	500ml

### **Mixture B NF**

Supplier: Amega Sciences plc

- Non-ionic surfactant; spreader; wetter
- 42.5% w/w polyoxyethylene (3EO) C12-C15 primary alcohol and 38.25% w/w polyoxyethylene (7EO) C12-C15 primary alcohol
- Adj No: A0570

Use with:

1. All approved pesticides on non-edible crops at their full recommended rate.
2. Timbrel (MAPP 05815) and all approved formulations of glyphosate in non-crop situations. Also with a range of specified herbicides (triclopyr, clopyralid or fluoxypyr) when used at less than half their recommended rate on forest and grassland, and with all approved pesticides at full rate on a wide range of specified edible crops up to specified growth stages. Improves action on Rhododendron, woody weeds, bracken, heather, nettles, docks and coarse grasses. Use at a rate of 2% of the final spray volume i.e. 1 litre in 50 litres of water or 2 litres in 100 litres of water. Only dilute with water and not with paraffin or diesel.

### **Silwet L-77**

Supplier: De Sangosse Ltd

- Drift retardant; spreader; wetter
- 80% w/w polyalkylene oxide modified heptamethyltrisiloxane and a maximum of 20% w/w allyloxypolyethylene glycol methyl ether
- Adj No: A0640

Use with all approved fungicides applied to cereals; all approved pesticides applied at 50% or less of their full approved dose.

<b>Water volume (lt/ha)</b>	<b>Required quantity of Silwet L-77</b>	
	<b>0.05 % Silwet L-77</b>	<b>0.1 % Silwet L-77</b>
100	50ml	100ml
200	100ml	200ml

**Use plant protection products safely. Always read the label and product information before use**

Dove Associates shall in no event be liable for any loss or damage caused by the use of products mentioned in this document

© Dove Associates 19/12/11

## Slippa

Supplier: Interagro (UK) Ltd

- Spreader; wetter
- 655 g/l polyalkyleneoxide modified heptamethyltrisiloxane
- Adj No: A0206

Use with all approved pesticides applied at full rate. Use Slippa at a rate to give 0.05% to 0.2% dilution of the final water volume in the spray tank, depending on the pesticide used and the target pest, disease, weed or crop.

Spray volume	Rates of use/ha	Area treated/1lt
200lt/ha	200ml	5ha
100lt.ha	100ml	10ha

## Slither

Supplier: De Sangosse Ltd

- Wetting agent
- 80.0 % w/w trisiloxane organosilicone copolymers
- Adj No: A0458

Use with all approved pesticides on non-edible and specified edible crops. Use Slither at the rate of 0.15% dilution of the final water volume in the spray tank, depending on the pesticide used and the target pest, disease, weed or crop. The maximum individual dose must not exceed 300 ml product per hectare.

## Wetcit

Supplier: Plant Solutions Ltd

- Penetrant; wetter
- 8.15% alcohol ethloxyate
- Adj No: A0586

Use with all approved pesticides on:

1. All edible crops when used at half their recommended dose or less
2. All non-edible crops up to their full recommended dose.

Also at a maximum concentration of 0.25% with approved pesticides on listed crops up to specified growth stages at full rate and at half rate thereafter.

## ZinZan

Supplier: Certis

- Extender; spreader; wetter
- 70% 1,2 bis (2-ethylhexyloxycarbonyl) ethanesulphonate
- Adj No: A0600

Use with:

1. All approved pesticides on non-edible crops.
2. All pesticides approved for use on growing edible crops when used at half recommended dose or less.
3. On specified edible crops, product may be used at a maximum spray concentration of 0.075% with approved pesticides at their full approved rate up to the growth stages shown on the label.

**Use plant protection products safely. Always read the label and product information before use**

Dove Associates shall in no event be liable for any loss or damage caused by the use of products mentioned in this document

© Dove Associates 19/12/11