

# Your guide to establish and maintain a weed and pest free lucerne crop



*Get the most out of lucerne by effectively controlling weeds and pests from paddock selection through to established crop.*

Lucerne is an increasingly popular and reliable crop for dairy cattle, sheep and deer due to its high feed value and resistance to drought. It produces high levels of dry matter and regrows quickly allowing for multiple cuts and/or grazing.

However, to get the most benefit out of growing lucerne, it is critical to control weeds and pests at every stage, from paddock selection to established lucerne maintenance. Otherwise yield losses of 20-40% as well as reduced crop longevity will be the result.

Lucerne stands provide high quality feed and have a lifespan of 10 years plus, **if** weeds and insect pests are well managed.



Weed damaged lucerne crop

Insect damaged lucerne crop

## Why control weeds and insect pests?

Weeds and insect pests can cause significant reductions in overall yield production.

### Weeds:

- Compromise establishment.
- Compete for moisture and nutrients.
- Shelter insects and diseases.
- Have low nutritional value.
- Have low dry matter production.
- Reduce crop quality.
- Cause uneven maturity and slower drying.
- May adversely affect stock health and performance as is the case with barley grass and storksbill.

### Insect pests:

- Affect plant vigour.
- Damage plant crown.
- Transmit diseases.

## Selecting and preparing a paddock

### Weeds

As lucerne is a long-term, perennial crop it is worth making the effort to establish lucerne correctly. This starts **before** lucerne is planted, by selecting potential paddocks well in advance. Difficult perennial weeds need to be identified and controlled properly before lucerne is sown.

If difficult weeds are present in a paddock, then your best option to deal with them is a programmed approach of cultivation and herbicide application. By using both, weed control is more effective.

### DIFFICULT TO CONTROL WEEDS

#### Perennial weeds

Couch, Californian thistle, yarrow, sorrel, dandelion group, horehound, ragwort, plantain

#### Annual weeds

Nodding thistle

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## WHY CULTIVATE?

|   |   |
|---|---|
| <b>Dandelion group, horehound, nodding thistle, ragwort, plantain</b>   | <b>Couch, Californian thistle, yarrow</b>   |
| <b>Cultivation</b> <ul style="list-style-type: none"> <li>• Stimulates weed seed to germinate.</li> <li>• Helps rot seed that does not germinate, thus further reducing the seed bank in the soil.</li> </ul> | <b>Cultivation</b> <ul style="list-style-type: none"> <li>• Rotary hoeing or discing at right angles breaks up roots into small fragments.</li> <li>• Forces root fragments to send up shoots, with the fresh regrowth being perfect for herbicide uptake.</li> </ul> |
| Cultivation will further level the paddock, allowing for more accurate seeding and cleaner mowing during harvest.   |   |

If the weed problem is severe, then use break crops such as brassicas, cereals or annual ryegrass for at least two seasons before planting lucerne. This allows you to target weeds with herbicides that cannot be applied over lucerne. Talk to your Adama representative to further discuss crop alternatives and herbicide strategies.

## PROGRAMMED APPROACH FOR DIFFICULT WEEDS HERBICIDE APPLICATION COMBINED WITH CULTIVATION

| WEEDS   | APPLICATION TIMING   | COMMENTS   |
|---|--|--|
| Couch   | 2 break crops requiring 3 applications <ul style="list-style-type: none"> <li>• Spring – autumn – spring or</li> <li>• Autumn – spring – autumn</li> </ul> | Use <b>POLARIS® 360, POLARIS 450 or POLARIS ACCELERATE</b> . Check product labels for rates. <ul style="list-style-type: none"> <li>• Use the herbicide and cultivation method to control weeds.</li> <li>• Always apply <b>POLARIS</b> with an organosilicone surfactant to increase herbicide penetration into weeds.</li> </ul>   |
| Californian thistle, yarrow, dandelion group, horehound, nodding thistle, ragwort, clover, plantain | 1 break crop with 2 applications may be sufficient   | <ul style="list-style-type: none"> <li>• Apply <b>POLARIS</b> when weeds are actively growing. For couch 10-15 cm active growth is preferred.</li> <li>• The use of clopyralid for weed control in break crops such as brassicas, cereals or annual ryegrass will help eliminate hard to kill weeds. Check the plant-back period before planting lucerne. Refer to the clopyralid label for more detail.</li> <li>• Once you have a paddock free of perennial weeds or if you have come out of an annual crop, use minimum or reduced tillage to prepare the paddock.</li> </ul> |

## Planting lucerne

### Weeds

Before planting lucerne, apply **ADAMA TRIFLURALIN** and soil incorporate. **ADAMA TRIFLURALIN** is a residual herbicide that provides a good spectrum of broadleaf weed and grass control. It is highly effective when used correctly.

**Rate: ADAMA TRIFLURALIN: 1.7-2.5 L/ha**  
Rate depends on soil organic matter (see label).

- **ADAMA TRIFLURALIN** must be incorporated immediately after application.
- It is critical that **ADAMA TRIFLURALIN** is incorporated evenly. Refer to the label for more detailed information on incorporation.
- Apply **ADAMA TRIFLURALIN** when tilth is fine with a minimum of clods and trash.
- Soil needs to be moist at application.
- Avoid hot, dry conditions at application.
- Rain within 7-10 days of application improves results.

## Insect pests (pre-emergence)

If there are known insect pests such as nysius, weevils and springtails in the paddock, then **PYRINEX® 500 EC** can be applied when spraying out the previous crop prior to planting lucerne. **PYRINEX 500 EC** is a non-systemic organophosphate (OP) insecticide controlling a wide range of insect pests. Ensure withholding periods for grazing are adhered to. **PYRINEX 500 EC** can be tank-mixed with **ADAMA TRIFLURALIN**.

**Rate: PYRINEX 500 EC: 1.25 L/ha for nysius (wheat bug) and weevils**  
**PYRINEX 500 EC: 200 ml/ha for springtails (lucerne flea)**

## Looking after emerging crops

### Insect pests (post-emergence)

If you have not used **PYRINEX 500 EC** at planting, monitor paddocks at emergence and apply **PYRINEX 500 EC** as soon as damage from aphids and Sitona weevil is evident.

**Rate: PYRINEX 500 EC: 300-450 ml/ha for aphids**  
**PYRINEX 500 EC: 600-800 ml/ha for Sitona weevils**

Pests are likely to build up in older pastures. Monitor crops carefully if sown directly from old pasture as weevils are more likely to be a problem. This is especially the case if zero or minimum tillage is being practised.

Take particular care to monitor first year crops closely at emergence. Apply **PYRINEX 500 EC** immediately if any damage is seen or if the block has a history of pest problems.

## Managing the seedling stage

### Weeds

Controlling seedling weeds in seedling lucerne can be difficult as herbicides, which are tolerated by lucerne, tend to control a very narrow spectrum of weeds. Weeds may only be suppressed. However, vigorous crop growth will help smother weeds before they recover.

#### Broadleaf weeds

Imazethapyr and 2,4-DB can be applied to seedling lucerne at the 2<sup>nd</sup> trifoliolate leaf stage. For best results weeds must be very small and actively growing under moist soil conditions. Refer to product labels for details.

### Grass weeds

If grass weeds are a problem, then apply **LEOPARD® 200 EC** or **ARROW® 360** at any time depending on the type of grass weed targeted. **LEOPARD 200 EC** is preferred for perennial and **ARROW 360** for annual grass weed control.

**Rate: LEOPARD 200 EC: 125-500 ml/ha for perennial weeds**  
**ARROW 360: 170-670 ml/ha for annual weeds**

## Managing first year crops

### Weeds

For lucerne less than 12 months old that has developed a crown, **FLASH®** controls many grasses and flat weeds. **FLASH** is a non-selective, non-residual, fast-acting contact herbicide active on green plant tissue only.

**Rate: FLASH: 1.6-2.4 L/ha alone or tank-mixed with simazine**

- Lucerne should be winter dormant, grazed down or mowed prior to application.
- Apply during winter (June – July, depending on geography and climate) while weeds are still young and small.
- If lucerne is autumn sown, then tap root must be a minimum of 100 mm or crop damage might occur.
- Typically the high rate is used for most effective broad spectrum weed control.
- Coverage is important with **FLASH**. Use a water rate of 200-300 L/ha. To achieve fine droplets for maximum coverage, use hollow cone or disc and core nozzles at about 300 kPa.
- **FLASH** is deactivated on contact with soil as it binds to clay particles. Hence, use clean water and spray clean weeds free of dust and/or dirt.
- Apply in humid, cloudy conditions or in the evening when it is cooler. Avoid hot, dry conditions as this will reduce efficacy.

# Managing established crops

## Weeds

The tried and tested standard for weed control in established lucerne is **FLASH** tank-mixed with **ATRANEX® WG**. This ensures that weeds are burned off and pre-emergence is covered off with one application. **ATRANEX WG** is a residual herbicide, which provides control of spring germinating weeds. **ATRANEX WG** is taken up through both leaves and roots giving reliable long-term weed control.

**Rate: FLASH: 1.6-2.4 L/ha tank-mixed with ATRANEX WG: 0.8-1 kg/ha**

- Refer to "Managing first year crops" for more details on applying **FLASH**.
- Under dry winter conditions where Shepherd's purse and storksbill are dominant, apply **FLASH** tank-mixed with **ATRANEX WG** as early in the season as possible. Otherwise some plants may recover if they become established.

Instructions for tank-mixing **FLASH** with **ATRANEX WG** or simazine:

- Half fill the spray tank with water. Start agitating the water.
- Slowly add **ATRANEX WG** or simazine to the agitating water.
- Ensure **ATRANEX WG** or simazine is thoroughly mixed before adding more water.
- Add **FLASH** when the tank is nearly full. Continue agitating while spraying.
- Always ensure the spray tank is completely empty before reloading. Do not top up the spray tank if there is product remaining from the previous load.

## Grass weeds

Should grass weeds be an issue, then apply **LEOPARD® 200 EC** or **ARROW® 360** at any time, depending on the type of grass weed targeted.

**Rate: LEOPARD 200 EC: 125-500 ml/ha for perennial weeds**  
**ARROW 360: 170-670 ml/ha for annual weeds**

## Insect pests

If the paddock is infested with aphids, then apply **APHIDEX®** or **PYRINEX 500 EC**. **APHIDEX** is a fast-acting carbamate insecticide, which is effective on most aphid species. If Sitona weevils are present, then apply **PYRINEX 500 EC**.

### APHIDEX

**Rate:** 200-250 g/ha for aphids

- Use the lower rate only on short or sparse crops.
- Withholding period: 7 days.

### PYRINEX 500 EC

**Rate:** 300-450 ml/ha for aphids  
600-800 ml/ha for Sitona weevil

- Apply as soon as insects appear.
- Use the low rate on short crops with little leaf. Use the high rate on tall leafy or dense crops.
- Do not spray plants in flower as bees may be foraging. Avoid direct contact with bees by applying in the evening.
- For Sitona weevils apply between May and early August. The optimum time is during the last two weeks of May.
- Withholding period: 7 days

## IMPORTANT

This brochure is not intended to replace the registered product labels. Always check the product labels for detailed information on rates, water rates, application timing, whether any adjuvants are recommended and a list of weeds controlled.

**Always read product labels carefully before using any product and follow label instructions.**

**For specialist advice in an EMERGENCY call 0800 734 607 (all hours).**

## WANT TO KNOW MORE?

Talk to your ADAMA representative to find out more on how to get a weed and pest free lucerne crop!

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