Maize success with Adama

Keep your maize paddock clean with an effective weed and pest programme from paddock selection through to established crop

Why look after your maize crop?

Good weed control is one of the cornerstones of ensuring a good maize yield. Yet, quite often the benefits of efficient weed control, especially applied post emergence, are not seen at the time of a potential application. Once weeds are established and harvesting is around the corner, it is simply too late to salvage the crop from weed infestation.

Often a clean looking paddock might have an unexpected heavy weed germination later on. This is because buried weed seeds are able to delay their germination until they get closer to the soil surface.

Additionally, some weed species can last for decades (e.g. scotch thistle and broom corn millet). Moreover, weeds that emerge before canopy closure will compete with the maize crop and significantly impact on yield.

It has been shown many times in the field that maize yields decline with increasing delay in herbicide applications. Yield losses of 30% are common, with losses even up to 70% in the Waikato region. Spraying too early is better than leaving it too late. Weeds are highly competitive if they germinate and compete with the crop at the same time.

Reaping the rewards with effective weed control

By incorporating a strong herbicide programme, especially with a post-emergence application, yield losses can be kept to a minimum with very low chemical input costs (see table 1 and 2).

	CLEAN CROP	WEEDY CROP WITHOUT POST-EMERGENCE	
		20% yield loss	30% yield loss
Yield (dry matter)	21,000 kg/ha	16,800 kg/ha	14,700 kg/ha
Value (NZD) dry matter (Avg. price/maize silage)	24 ¢/kg	24 ¢/kg	24 ¢/kg
Total yield value/ha	$5,040	$4,032	$3,528
Value lost/ha (Cost of weeds)		**$1,008**	**$1,512**

Table 1: Yield value comparison in clean vs. weedy maize crops

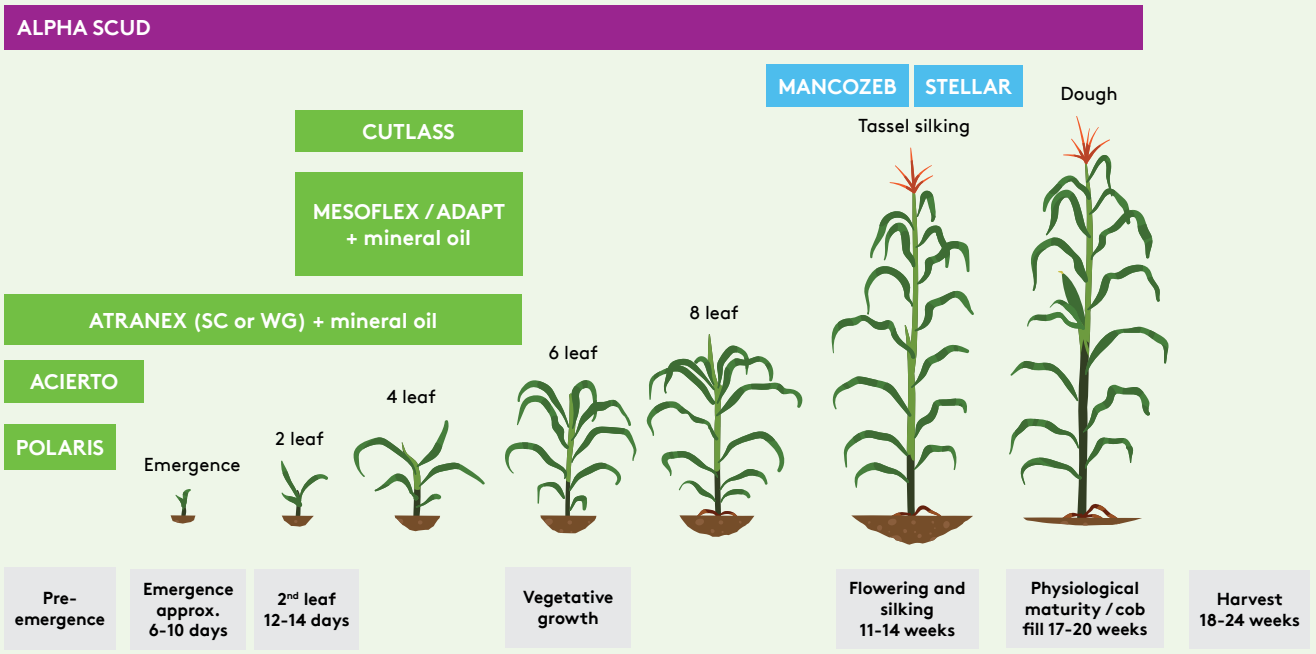
APPLICATION	COSTS (Avg. retail price, excl. application costs)
Pre–emergence ACIERTO: 2.5 L and ATRANEX: 2 L	~ 60 $/ha
Post–emergence MESOFLEX: 200 ml and ADAPT: 110 g	~ 95 $/ha
By spending an estimated $95 for an Adama post-emergence application plus $40 application costs per hectare, the yield value potential from the initial investments can be protected and maximised.	

Table 2: Estimated input costs in maize

ADAMA

HERBICIDE | INSECTICIDE | FUNGICIDE

GETTING THE TIMING RIGHT



Selecting and preparing a paddock

Weeds

Effective weed control starts with identifying the weed spectrum in the selected paddocks and then using a strategic approach to tailor the herbicide programme accordingly for the best possible outcome.

To ensure difficult to control weeds are managed effectively right from the start, apply **POLARIS® 360**, **POLARIS 450** or **POLARIS ACCELERATE**. To broaden the weed control spectrum and to increase efficacy Sharpen® can be added to the tank-mix. Check product labels for rates.

Planting maize

Weeds

Once maize is planted, apply a tank-mix of **ACIERTO®** and **ATRANEX®** (**WG** or **SC**) for a broad spectrum of weed control. Both are effective herbicides for control of annual grasses and many broadleaf weeds in maize.

ACIERTO is absorbed initially through the shoots and later through the roots, killing susceptible weeds by inhibiting growth as they germinate. It provides residual control for up to 10 weeks. **ATRANEX** acts by inhibiting photosynthesis and is absorbed through the leaves and roots.

NOTE: There can be escapes of fathen due to resistant biotypes.

Rate: ACIERTO: 2.3-2.8 L/ha tank-mixed with ATRANEX WG: 0.8-1.6 kg or ATRANEX SC: 1.5-3 L/ha

- Apply immediately after sowing and prior to crop and weed emergence.
- Soil surface should be firm and free of trash and clods.
- For best results apply to moist soil with rain or overhead irrigation soon after application. This allows a continuous film of **ACIERTO** to form on the soil surface, ensuring the control of germinating weeds.
- Use a higher rate for soils high in organic matter or clay.
- Do not apply under dry slow-growth conditions.
- Apply as a directed band spray or as an overall spray.
- The addition of a non-ionic wetting agent is recommended.
- Perennial weeds are not controlled by **ACIERTO**.

Looking after emerging crops

Insect pests (post-emergence)

Cutworm can severely affect your maize crop. Damage can start before maize emerges, but typically occurs after emergence when plants are cut and felled. To keep the damage to a minimum, scout paddocks on a regular basis for several weeks after maize emergence.

Infestation levels of 3 cutworms per 100 plants (before the 2 leaf stage) or 6 per 100 plants (at the 2-4 leaf stage) can cause losses well over 10,000 plants/ha. Thus, it is important to apply **ALPHA SCUD®**, a highly effective SP insecticide, at the first sign of infestation.

Rate: ALPHA SCUD: 150-200 ml/ha for greasy cutworm

- Apply **ALPHA SCUD** immediately when damage to seedlings is noted.
- Use direct spray to the base of the plants and surrounding soil.
- For best results apply in the early evening.

Post-emergence control

Weeds

WHY IS THE POST-EMERGENCE APPLICATION IN MAIZE SO IMPORTANT?

Often neglected, but highly critical for effective weed control is the post-emergence application. This application is particularly important when:

- The weed burden is heavy or difficult to control weeds are present.
- The seed bed has been poorly prepared (e.g. poor ground work and trash) as this reduces the efficacy of the pre-emergence application.
- The weather prior to or at the time of pre-emergence application is dry. This affects the product distribution on the soil surface, leading to an incomplete chemical seal and weed escapes later on in the season.

Maize paddocks need to be scouted on a regular basis to ensure weed flushes are spotted early and a corrective post-emergence application can be administered in time.

The best approach for getting on top of weeds is a tank-mix of **MESOFLEX®** for broadleaf weeds and **ADAPT®** for annual grasses.

ADAPT works particularly well when targeting germinating grasses that may have escaped the pre-emergence herbicide application due to dry soil conditions at the time of application or heavy trash laden soils with poor chemical soil coverage.

MESOFLEX has a much wider range of broadleaf weed control than other post-emergence products on the market. Applying both herbicides as a tank-mix ensures that a broad spectrum of weeds are controlled with one post-emergence application.

MESOFLEX and **ADAPT** are systemic herbicides, which are rapidly absorbed by weed leaves and translocated throughout the plant.

Rate: MESOFLEX: 150-200 ml/ha tank-mixed with ADAPT: 50-110 g/ha

- Apply when maize crop has reached V3.
- Weeds need to be at 2-4 leaf stage.
- Use with 1 L/ha of mineral oil to activate **ADAPT** and enhance the performance of **MESOFLEX**.
- Warm, moist conditions and adequate soil moisture, both before and after application, will improve weed control.
- **ATRANEX** can also be used in a tank-mix with **MESOFLEX** and **ADAPT** to complement the control of broadleaf weeds and annual grasses.
- If there are weed escapes (e.g. fathen, amaranthus, Californian thistles and cornbind), **CUTLASS®** can be used as an alternative tank-mix partner with **MESOFLEX** or **ADAPT** when maize is 10-30 cm in height. Consult with your technical advisor to tailor your post-emergence application accordingly.

Insect pests

Should cutworms be present, **ALPHA SCUD** can be added to the post-emergence tank-mix.

Rate: ALPHA SCUD: 150-200 ml/ha for greasy cutworm

Pre-flowering

Diseases

If disease conditions for northern leaf blight and common rust are ideal (e.g. lots of moisture in late January to early February), then fungicide applications may become necessary.

MANCOZEB is a multi-site protectant fungicide for the control of northern leaf blight. Apply early before disease becomes established in the crop and repeat as necessary to maintain control.

For common rust **STELLAR®** is your best choice. It is a systemic fungicide, with both protectant and curative activity. It is absorbed through foliage and stems, controlling fungi by disrupting cell wall development. **STELLAR®** is translocated upwards in the plant and provides some protection to new growth.

MANCOZEB

Rate: 2.1 kg/ha for northern leaf blight

- Apply by aerial application at the first sign of disease. Repeat sprays as necessary.
- Full coverage is important when applying as **MANCOZEB** is a protectant only.
- Adding a wetting agent will improve distribution coverage.
- Do not apply within 14 days of harvest.

STELLAR

Rate: 1 L/ha for common rust

- Apply as a preventative spray on susceptible cultivars when conditions favour disease. Otherwise, and on more tolerant cultivars, apply at the first appearance of disease.
- Continued disease pressure or re-infection may require a further treatment 14-21 days later.
- Do not apply later than 42 days before harvest for grain and 28 days before harvest for silage green feed.
- Do not apply more than two applications per season.

Insect pests

Where crop monitoring indicates a presence of armyworm or corn earworm and if there is no apparent parasitic wasp activity, then an application of **ALPHA SCUD** can be considered.

Rate: ALPHA SCUD: 150-200 ml/ha for armyworm and corn earworm

- Armyworm: Apply as soon as pests appear.
- Corn earworm: Apply immediately when pests appear on the silks.
- Repeat every 10-14 days as dictated by pest activity.
- Use only after the 7th of January and if crop monitoring shows need.

WANT TO KNOW MORE?

Talk to your ADAMA representative to find out more on how to maximise your yield with a weed and pest free maize crop!

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).

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