



Summer weeds.



If you have sheep, and the weeds are not toxic, graze them out. It's the cheapest option by far!!!

But! Hard grazing may leave you with plants that have large root systems, very small tops, are affected by water stress, and so extremely difficult to control come sowing time.

Goosefoot, stinkwort, Afghan and paddy melon, caltrop, Paterson's curse, heliotrope etc. can all affect livestock and should not be controlled by grazing. A few plants will not hurt, but a pasture composed primarily of such species is definitely a risk. They should be controlled as early as possible, and stock monitored to ensure they are not grazing the remains. If spraying these then grazing, it is good practice to use something selective to leave any grasses & volunteer cereals growing and provide alternative food for the stock.

For chemical control, spray with Glyphosate.

Use around 500 ml/ha for easy targets like volunteer cereals, small capeweed, doublegee (jacks), and caltrop. Most grasses are controlled at this rate as long as they have not been moisture stressed.

Use around 1 L/ha for harder targets like ryegrass, bigger weeds.

Add spraying oil at $\approx 1\%$ if humidity is very low. If weeds are moisture stressed, the rate needed will increase dramatically – to 2+ L/ha.

Add partner herbicides for especially difficult weeds as below.

Triclopyr. Best option for paddy melon. Use at 100-150 ml/ha depending on size. 75 ml/ha should be enough for Afghan melons.

2,4-D ester 800. General spike to improve control of Brassica weeds (radish, turnip, mustard, Ward's weed, Lincoln weed, shepherd's purse etc), Afghan melon, stinkwort, goosefoot etc. Use at 300-500 ml/ha.

If Ester 800 gets banned, Ester 600 is an alternative, but more expensive.

Metsulfuron. Another general spike, which improves control of Brassicas, wireweed, doublegee, erodium (geranium), volunteer legumes etc. Use at 5 g/ha.

(The other sulfonyl urea herbicides – chlorsulfuron, triasulfuron – can also be used as spikes, but have a longer residual life in the soil. This may be some advantage if there are further summer rains, but can also be detrimental if a legume crop is planned for winter).

Note 1: Metsulfuron and 2,4-D ester can be used together as glyphosate spikes. In fact this is probably the most common summer weed mix.

Note 2: If 2,4-D ester is unavailable, 2,4-D amine 625 can be used instead. 384 ml amine contains the same amount of 2,4-D as 300 ml of ester 800, but will have slightly less activity as it is water based rather than oil based. There is a theory that only 2,4-D isopropyl amine should be mixed with glyphosate, but DAWA trials by Ric Madin in the mid 80's showed that glyphosate 2,4-D dimethyl amine mixes were equal to mixes with iso-propyl amine or ester.

Ester 600 can also be used, 400 ml of ester 600 being equal to 300 ml of ester 800.

Note 3: Both Triclopyr and Metsulfuron have some residual activity.

Metsulfuron should be well gone by the time winter crops are to be sown (when Du Pont were originally developing the chemical they thought of registering it for a knockdown 6 weeks ahead of planting lupins. Whew!!). On alkaline soil however, caution would dictate it not be used if lentils or chickpeas were to be planted.

Triclopyr should probably be avoided if any legume is to be planted.



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If Chlorsulfuron or Triasulfuron were used as spikes in place of Metsulfuron, then definitely avoid legumes or canola. These SU's have a much longer residual.

For certain situations, special mixes may be appropriate.

2,4-D ester plus atrazine can be used if the winter crop will tolerate the atrazine. 3-500 ml/ha ester plus 500-1000 g/ha atrazine will control most weeds, and leave the residual atrazine behind for the following lupin or TT canola crop.

Adjust the rate used at seeding accordingly.

2,4-D amine plus diuron can be used where there are volunteer cereals needed for grazing but which also contain broadleaf weeds that need removing (melons, goosefoot, caltrop etc) but which are unsafe to graze. Metsulfuron could also be added to this.

The rates need to be higher than those used in-crop, around 200-250 g/ha diuron plus 400 ml/ha 2,4-D 625. Adding a spray oil is not essential, but it will give extra kick to the diuron if weeds are stressed. The usual bit of Metsulfuron can be included.

2,4-D ester can be used in place of amine for summer spraying, but don't use it in-crop – it hots the diuron up and turns the crop yellow.

Metsulfuron or Chlorsulfuron could be used alone in volunteer cereals if they can control the only broadleaves present. Caltrap, heliotrope (potato weed), radish, turnip etc.

Be careful if there is a possibility the paddock will have a legume or TT canola crop next. Residues may cause damage. Cereals and Clearfield canola are fine.

Metsulfuron at 10+ g/ha could be used early in summer to hold broadleaf weeds, when you expect further rains and don't want to commit a lot of money early. The weeds will need to be small (2-4 leaf for melons) and you will need to monitor well and spray later if (when?) they start to recover.

Points to note:

Glyphosate is very weak on plants that are under water stress. The required rate for control increases about 10 times as stress develops. And once the plant has been stressed, it remains harder to control for some weeks after a relieving rain. The message is – if summer weeds need controlling, do it as soon as possible. Don't wait in case there is another germination.

Bipyridyls (Brown Out/Spray.Seed, Paraquat) are much better options on stressed plants, as long as they are small. Big weeds can regrow from the root system.

Using residual chemicals in the hope of getting summer-long control is generally a waste of time and money. Summer rains in southern Australia tend to be brief, and the soil surface does not remain wet long enough for the chemicals to be activated.

Costs (2009)

Chemical	Rate	\$/ha (GST ex)
Glyphosate 470	500 ml – 1 L	2.00 – 4.00
Triclopyr	100 – 150 ml	1.75 – 2.65
2,4-D ester 800	300 – 500 ml	2.04– 3.40
Metsulfuron	5 g	0.32
2,4-D ester + atrazine	300 ml + 500 g	6.29
2,4-D amine 625 + diuron	400 ml + 250 g	4.05