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# LEGUME LOGIC

Global Vision, Local Focus

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## Herbicide Resistant Crops: What's the Story?

*Professor Carol Mallory-Smith,  
Oregon State University.*

The ethics and issues surrounding herbicide resistant crops have divided consumers and scientists for years.

Herbicide resistant plants are now being planted on millions of acres of cropping land in the US. This area is expected to increase dramatically over the short-term as growers and industry embrace the benefits of herbicide resistant crops.

As technology races ahead, critical issues surrounding the introduction and commercialisation of herbicide resistant crops remain unexplored.

The issues, impacts and impli-

cations of herbicide resistant crops on society, agriculture and the ecological system need to be further researched. We cannot and should not separate societal issues from agricultural and environmental issues.

The introduction of herbicide resistant crops means that scientists have to start thinking of themselves as part of the public and address concerns surrounding transgenic crops. Labelling, containment of the crop, the ethics of producing transgenic crops and corporate control of seed and herbicides are some of the issues concerning consumers.

Many of us may not share these views, but they are held by others and we must address them.

The introduction of each new

herbicide resistant crop needs to include specific management strategies for the crop and use of the herbicide.

Herbicide genes can be moved by cross-pollination with a susceptible crop or by hybridisation with another species.

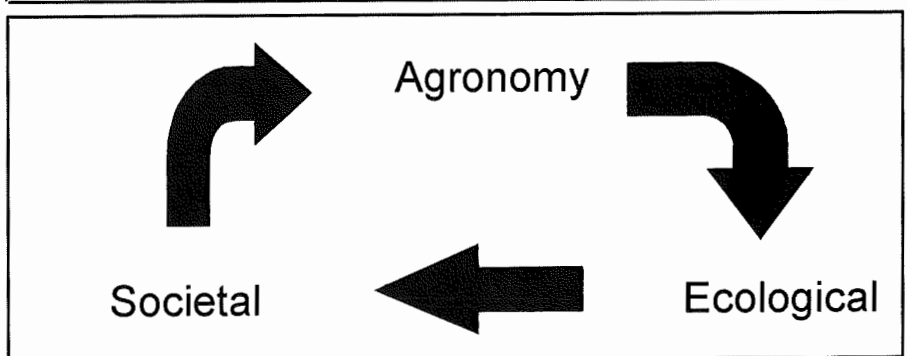
If this occurs with native plants or weeds, there exists the threat to our biodiversity. As biological trespass becomes an issue, who will be responsible for the genes that move from one site to another?

The deployment of herbicide resistant crops on millions of acres means that we must ask the right questions, now.

*A full copy of this article is available from the Grain Pool.*



Carol Mallory-Smith



## Aphids - The spray debate

The decision to spray legume crops for aphid control is always difficult.

Some varieties of lupins, such as Tallerack and the yellow lupin Wodjil, are extremely susceptible to aphids and will probably need at least one spray this season.

Lupins are at most risk from physical damage during budding and flowering.

The following guidelines may help if you are having trouble deciding.

If 10-15% of the flowering heads are wilting due to aphid infestations you may need to spray the crop.

Before you do you should check for two things:

1. Ensure there is no cold front approaching, and;
2. Confirm there are no brown aphids in the colonies - this indicates a fungus is present which can dramatically reduce aphid numbers.

If either of these conditions exist delay spraying.

## Swathing lupins

With a proliferation of machines available to swath the canola crop this year, why not try swathing some lupins?

Research in the late 1980's showed that harvest losses could be minimised by swathing lupins.

For further information consult AGWEST farmnote 22/86.

**1999/2000 Lupin Pool Indicator Price**  
**\$147-152**

## Ascochyta Prevention

For chickpea crops to be considered a viable legume it is vital to monitor and control for ascochyta blight disease. All chickpea crops in the State should have been sprayed at least once with a preventative fungicide spray and areas designated for seed for planting next year should be receiving very special attention and treatment of sprays.

## Budworm control

Budworm is currently active in the northern parts of the agricultural region.

Both eggs and larvae can be found on grain legume crops. Budworm monitoring and control is especially important if the seed is to be used for human consumption.

Lentils, field peas, faba beans and chickpeas are all very susceptible to attack, whereas lupins and canola have some resistance.

It is important to monitor now for larvae and sweep with net or take counts of the larvae.

*The table below indicates the economic thresholds for spraying:*

CROP	Larvae/m <sup>2</sup>
Field Peas	2
Chickpeas (Desi)	1 - 2
Faba Beans	1
Lentils	1 - 2
Lupins	10 - 12
Canola	5 - 10

## Pulse Points

- Interest from the Middle East for faba beans remains strong due to the drought which is still affecting production in the world's main pulse growing areas.
- Quality is the main concern for Western Australian growers of faba beans.
- The faba bean market depends heavily on the visual characteristics of the bean and as such growers are urged to make this issue a priority when growing faba beans and other pulses destined for human consumption markets.
- The Canadian harvest which got off to a slow start is now in full swing. It appears a higher proportion of the chickpea harvest will be segregated to feed than originally thought.
- The price outlook for chickpeas at this stage remains slightly optimistic.

## 1998/99 Lupin Pool Payments

Estimated Pool Price	\$149-157
Harvest Advance	\$115
Advance Paid to Date	\$15
August Advance	\$7.50
Next Predicted Advance	\$7.50
Remaining Equity	\$5.95

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