



Battling Black Shank: Chemical Control

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First, a few words about fungicide changes for 2006

- Add **Forum**, a flowable formulation of Acrobat, for blue mold control in the field.
- Add **Aliette** for control of blue mold in the bed and field. Is a phosphonate. Works best if applied 5 days before infection. Do not allow float bed applications to contact roots. Can be used til 3 days before harvest; limit 5 apps. in field, 2 in bed.
- Plan to try to re-new Section 18 for **Quadris** foliar applied for target spot and frog-eye. Federal label has been approved and should be finalized late in the year.

Black shank questions

- When is it safe?
- What about Quadris?
- What about phosphonates?
- Optimizing Ridomil





More difficult to identify on young plants



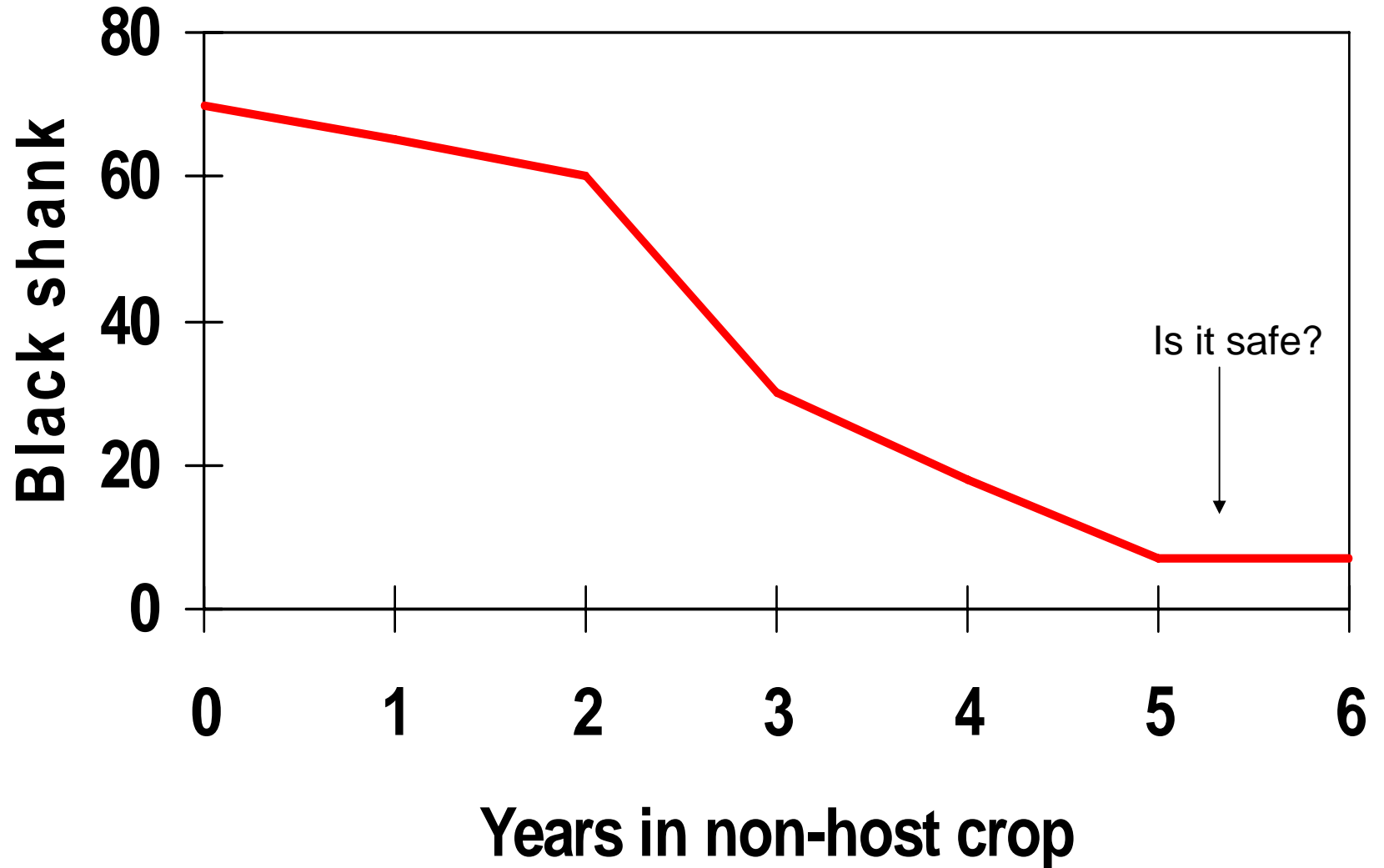
When is it safe?

How long do I have to rotate before I can cut out the Ridomil?

Or cut the rate to 1 pint?

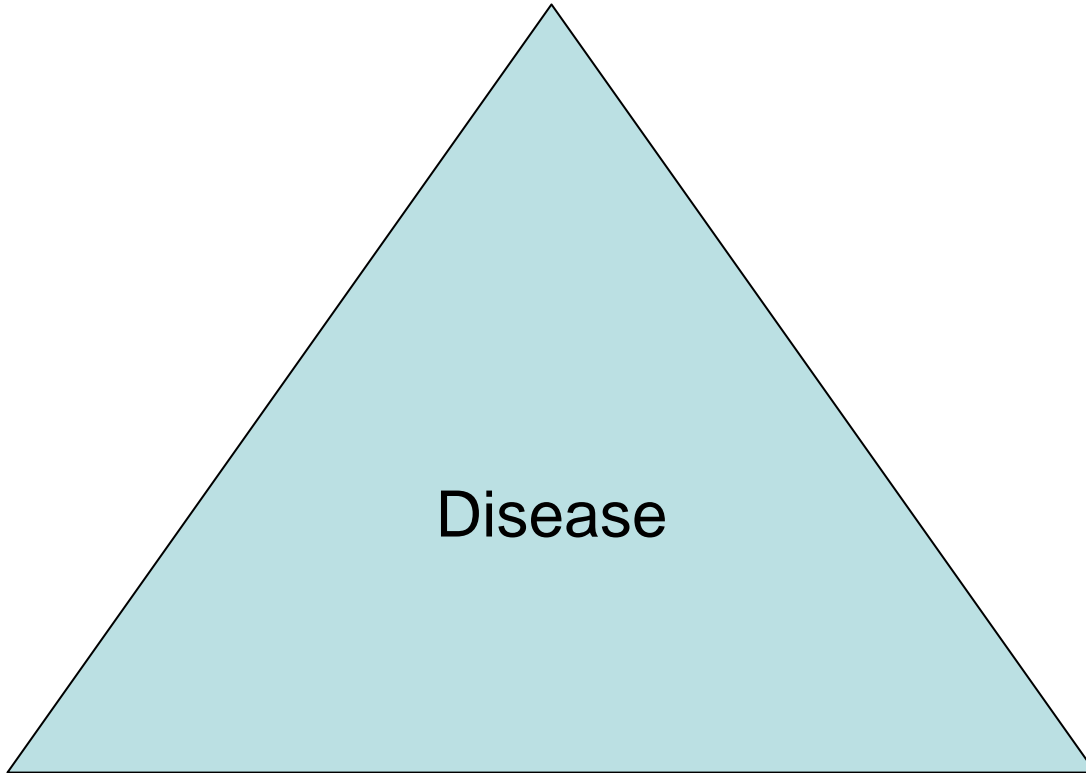
Black Shank Survival

Typical pattern



**Remember
the triangle!**

Germ



Disease

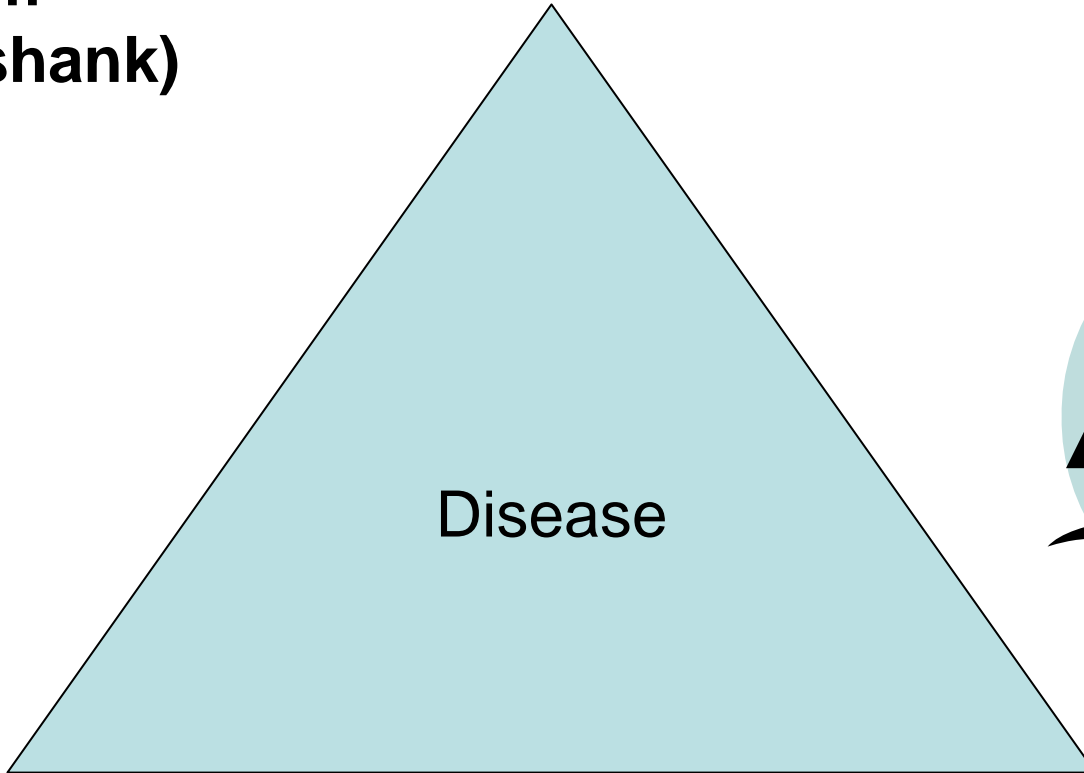
Plant

Environment

The Disease Triangle

**There's more to
consider than just
the germ
(black shank)**

Germ



Plant

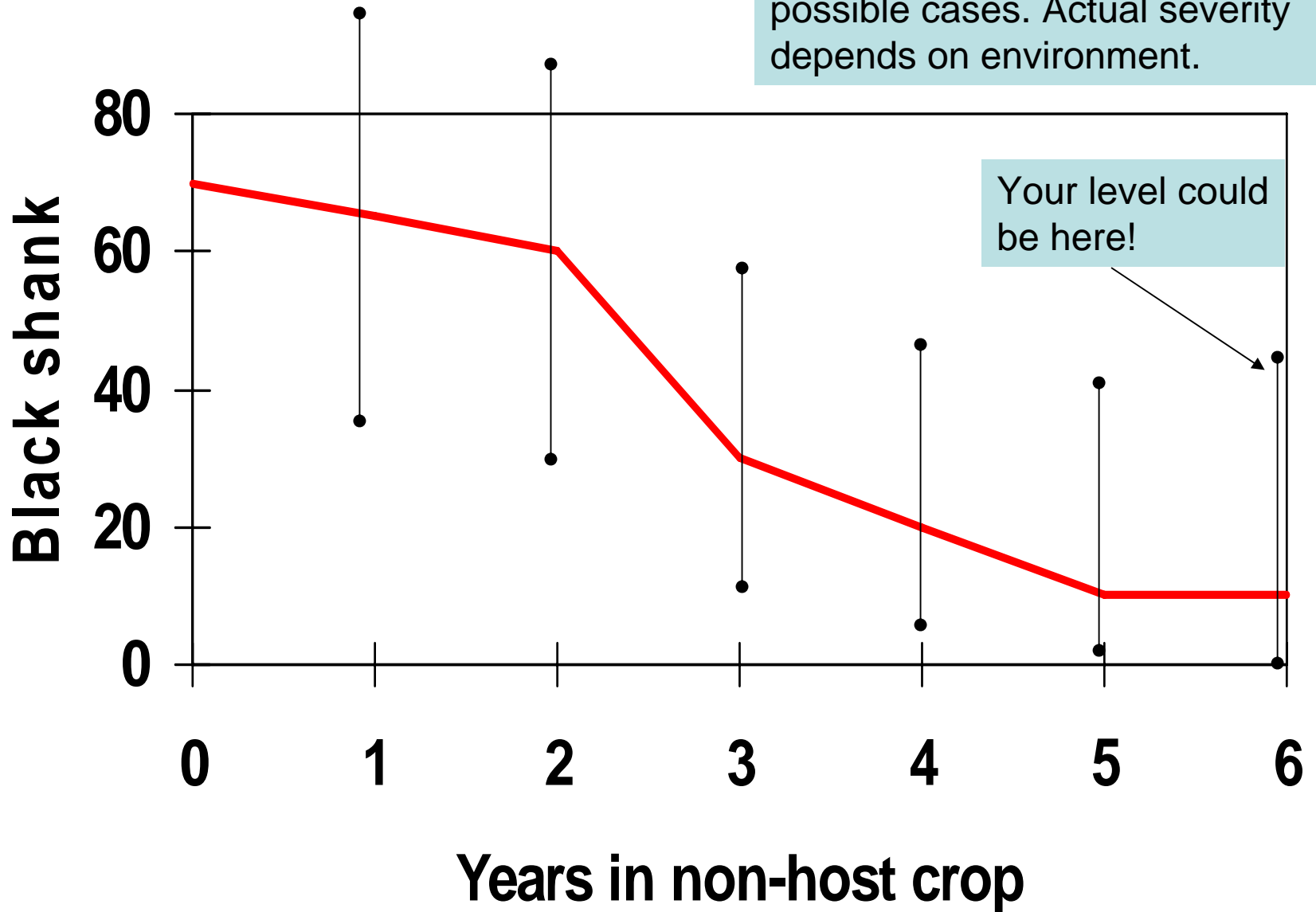


Environment

The Disease Triangle

Black Shank Survival

These levels of black shank are averages of a wide range of possible cases. Actual severity depends on environment.





You can't predict the weather for the
upcoming growing season - -
So you can't predict the amount of black
shank you will get, even if you knew how
much of the germ was in the soil.

Conclusion

There are 3 R's in black shank control - -
After you have "R"otated, don't forget the
"R"esistant variety and "R"idomil.

When are we going to get a label for Quadris (soil applied)?



No time soon!

Black shank trial, Overton Co., 2000



2005 Black Shank Trial, Macon County, TN

Evaluation of Quadris and some phosphonates (ProPhyt, AgriFos)



Black Shank Control Trial Macon County, TN, 2005

		Rate/A	
Treatment	How applied	At planting	4 wks after
Ridomil	soil	1 pt	1 pt
Ridomil + Quadris	soil	1 pt + 18.5 fl oz	1 pt + 18.5 fl oz
ProPhyt	soil	4 pt	4 pt
Quadris	soil	18.5 fl oz	18.5 fl oz
AgriFos	foliar	--	4 pt
ProPhyt	foliar	--	4 pt
check	--	--	--

Black Shank Control Trial Macon County, TN, 2005

Treatment	How applied	Rate/A		Black shank (% plants infected)
		At planting	4 wks after	
Ridomil	soil	1 pt	1 pt	33.8 a
Ridomil + Quadris	soil	1 pt + 18.5 fl oz	1 pt + 18.5 fl oz	36.1 a
ProPhyt	soil	4 pt	4 pt	56.7 b
Quadris	soil	18.5 fl oz	18.5 fl oz	56.9 b
AgriFos	foliar	--	4 pt	58.6 b
ProPhyt	foliar	--	4 pt	59.4 b
check	--	--	--	85.1 b

Ridomil application patterns

Pints used at planting, first cultivation, & layby

1-1-1

2-0-1

1-0-1

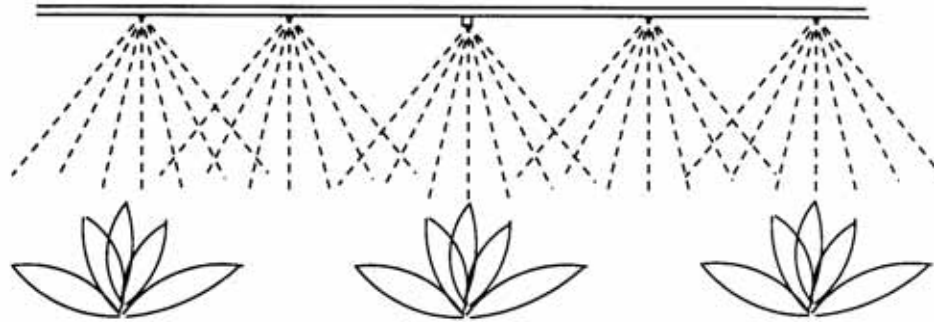
2-0-0

It's best to make more than one application.

How do we make the layby
application of Ridomil?

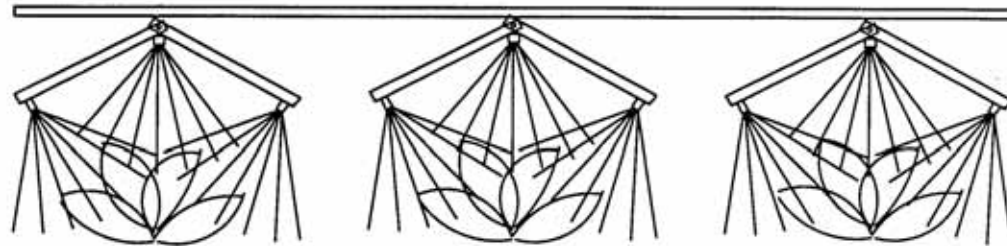
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Full broadcast spraying



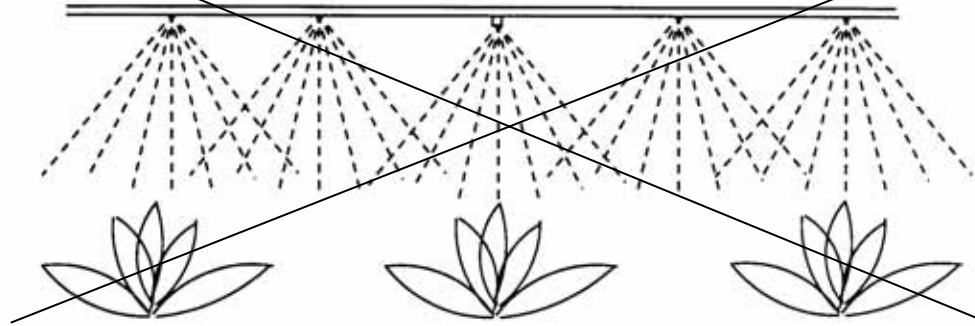
Spray boom with three nozzle per row swivel arrangement

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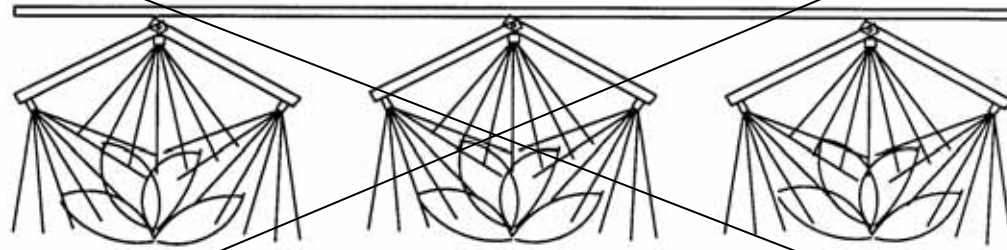


Nozzle side arms swivel up and down to facilitate best coverage angles

Full broadcast spraying

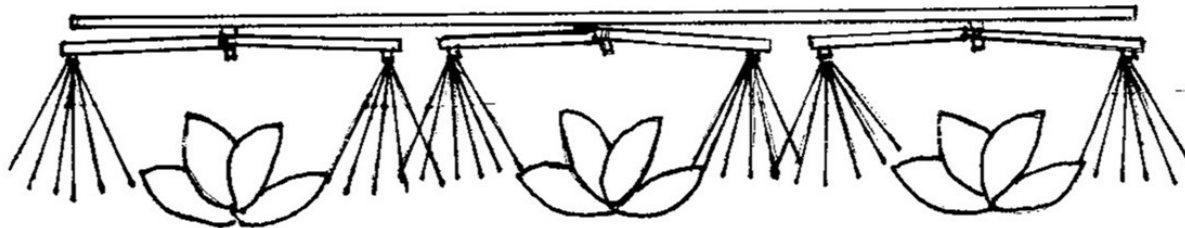
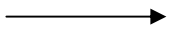


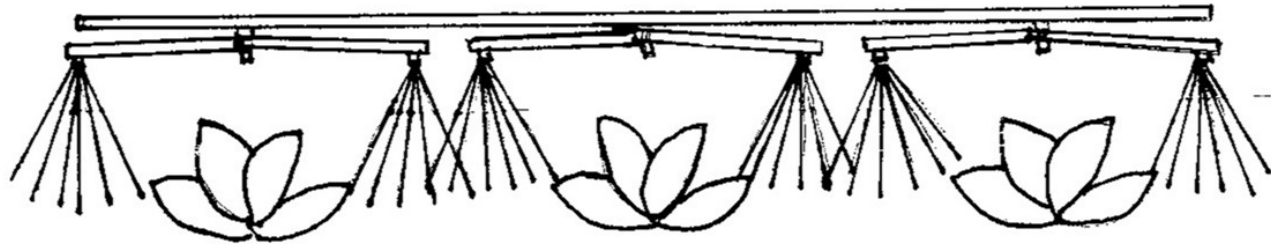
Spray boom with three nozzle per row swivel arrangement



**Nozzle side arms swivel up and down to
facillitate best coverage angles**

For Ridomil





Ridomil needs to be directed to the soil.

Black shank is picked up by the roots – So should
Ridomil.

Ridomil that is intercepted by the leaves will not
make its way to the roots.

Some Parting Thoughts

- Don't expect complete control with any one method.
- Crop rotation is the best single method of control.
- Use 2 pt of Ridomil, preferably split apps.
- Use a variety with a resistance rating of at least 4.
- If you don't have black shank, try not to ever get it!
Think long and hard about getting into irrigation, since black shank can easily be spread that way.