2005

Pesticide Safety 2005 - Newly Registered Insecticides

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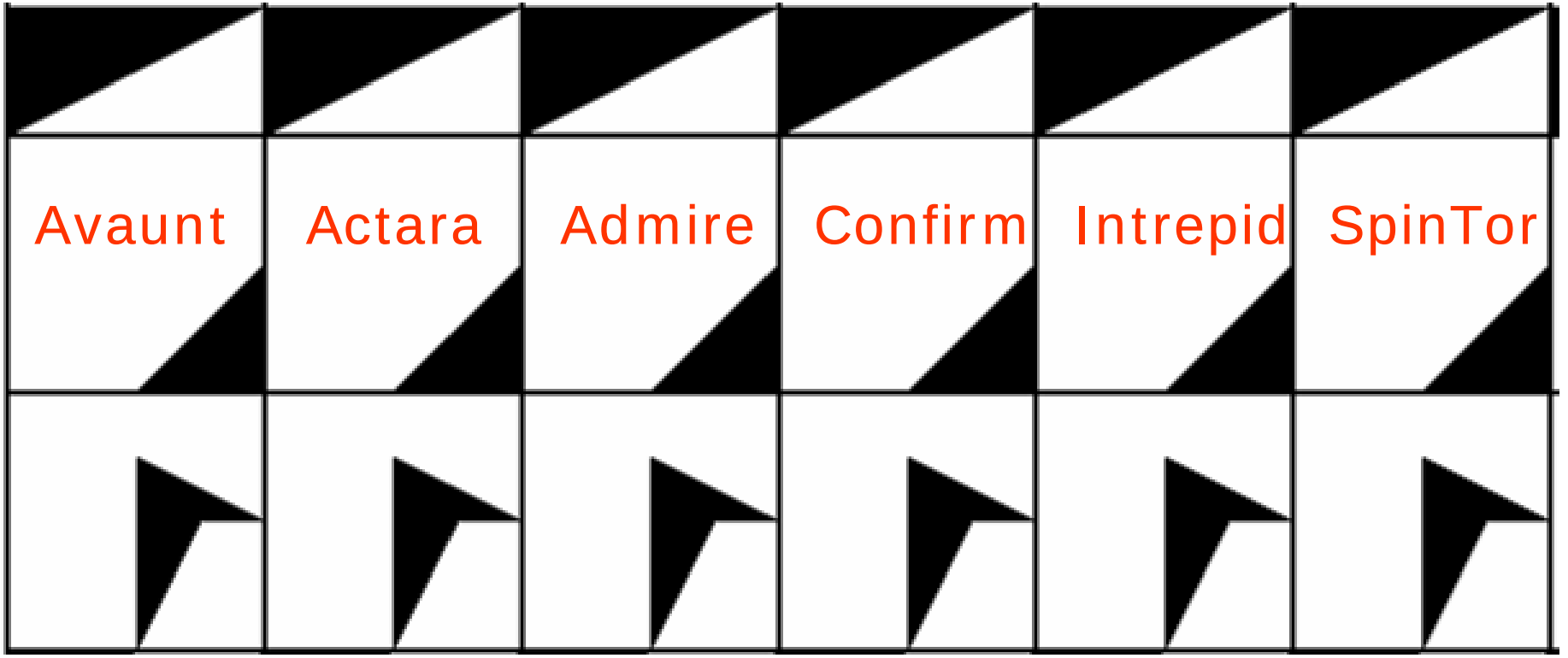


Newly registered insecticides

A. Averill
UMass Cranberry Station

Reduced-risk insecticides

- Lower health risk to humans, non-targets, and environment
- Broadens adoption of IPM and elimination of conventional insecticides
- Given special consideration and expedited registration

Primary activity has changed

- Old: contact nerve poisons
- New: still mostly nerve poisons but are:
  - Translaminar: locally systemic; e.g. penetrates leaf tissue and forms reservoir (SpinTor)
  - Systemic: taken up and transported to growing plant portions (Admire, Actara)
  - Ingestion: must be eaten to be effective (Avaunt, Intrepid)

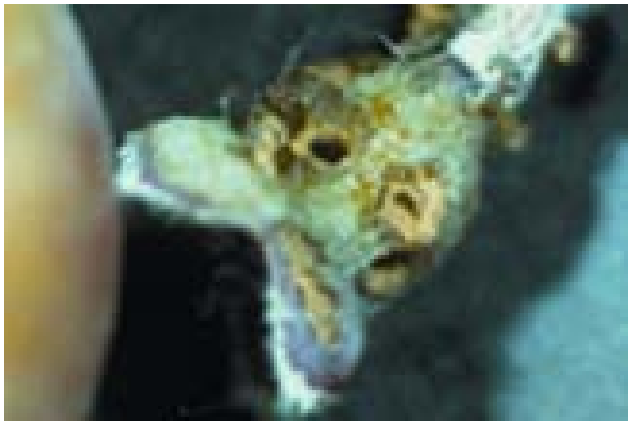
Avaunt **2005 not yet registered**	Actara	Admire	Intrepid Confirm	SpinTor Entrust
reduced risk	OP alternative	OP alternative	reduced risk	reduced risk
neurotoxic	neurotoxic	neurotoxic	hormone agonist	neurotoxic
ingestion	systemic/ ingestion	systemic/ ingestion	ingestion	Trans-laminar
spring weevil only, also hits most leps	Spring and summer weevil, flea beetle	Soil grubs: colaspis, oriental beetle	Spag, bhf, cutworms, spanworms, gypsy	Spag, bhf, cutworms, spanworms, gypsy

Avaunt

- 2005 Emergency use renewal *under consideration for cranberry weevil*

- *Do not use until cleared*
- *May never be cleared, so your crop must be destroyed if you use it anyway*

Avaunt



Spring population

Summer population

Superb! weevil control

NOT EFFECTIVE

IF permit comes through, summer app will not be allowed

Avaunt for spring weevil

- 6 oz/A
- Add Avaunt to water
- Chemigation highly effective
  - Drops with longer rinse

- Hits spring lep pests (spag, bhf, spanworms, cutworms, gypsy moth) at same time

Avaunt for spring weevil

- If permit comes through:
  - Heavy weevil pressure, use Avaunt and save Actara for summer control

Actara

- Full regular label for cranberry 2005

- Cranberry weevil
  - spring: overwintering adults May-June

    AND
  - summer: new adults July

Actara

- Moves into plant—50% penetration after 4h
- High residual control

- Low use rates: 2-4 oz
- Only 2-3 apps possible; 8 oz limit/season

Actara has restrictions

- No aerial applications
- No flow-through bogs
- Restricted use

- NO Zone II applications, unless….

Actara

- Not broad spectrum
- Weevil and flea beetle only
  - Will not help with other leps

Admire 2F
Soil insects

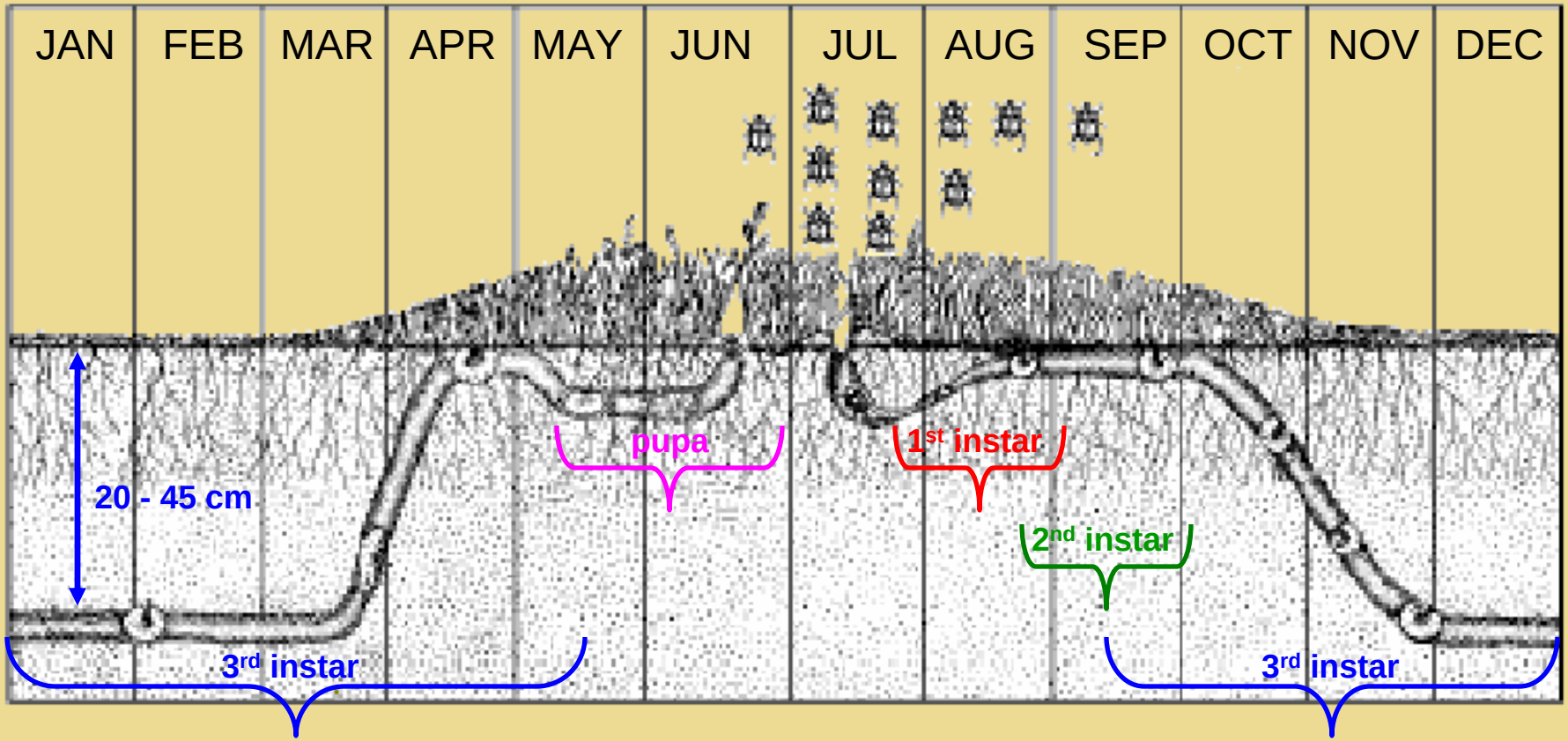
- TARGET GRUBS IN SOIL
- Apply as drench

Admire

- Two applications (32 oz./A/season)

- Soil drench
  - Chemigation/ground only
  - Irrigate before & after (0.1-0.3”)
  - Do not use on saturated soil

Oriental beetle life cycle



Apply in July for OB

- Larvae just hatching from eggs are target
  - Monitor adults with traps
- Get Admire on early so can be taken up by plant
- Expensive; good timing will maximize investment
- Very long residual activity

Admire

striped colaspis

Use sweep net
In June/July to
determine
adult activity

Target just-hatching
larvae with
soil drench

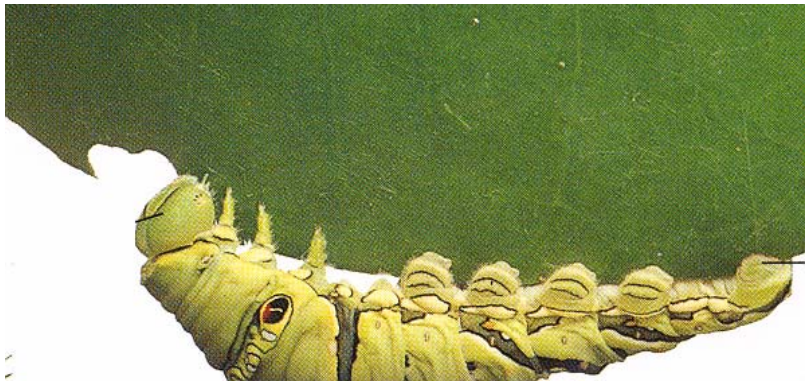
Confirm and Intrepid

- Interfere with molting
- Specific to caterpillars

Intrepid

- If can, choose Intrepid
  - Sparganothis
  - Spanworms
  - False armyworm
  - BH fireworm
  - Gypsy moth
- Higher activity than Confirm

Confirm and Intrepid



- Must be eaten
  - Spray timing: be vigilant by spring sweeping and summer pheromone trapping
  - Get on EARLIER
    - Small caterpillars targeted
    - Has long residual

Confirm and Intrepid-summer generation BHF, Spag

- Look for first moth of flight
- Apply, and then apply again

Confirm and Intrepid

- Coverage! Aerial or short rinse
- Spreader/binder recommended
- Drying time (6 h)

- Multiple apps and high rates recommended as best

Intrepid

- Zone II restriction

SpinTor

- Entrust: = organic formulation
- Caterpillars!
  - Spag, spanworms, false armyworm, fireworm

SpinTor

- 10 oz/A (29 oz/A/season)

- Not persistent
- Good coverage very important
- Efficacy can be low if use lowered rate
- Must have good system and low rinse time

Avaunt **2005 not registered**	Actara	Admire	Intrepid Confirm	SpinTor Entrust
Shorter rinse needed			Shorter rinse needed; multiple apps	Shorter rinse needed
	High residual	High residual	High residual	Low residual
	No Zone II		Intrepid: no Zone II	
		Target eggs as hatch	Must target small caterpillars	

Diazinon still compound of choice for cranberry fruitworm

- Intrepid iffy ; low gallonage only
- Aerial must be evaluated for new compounds

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Avaunt **2005 not yet registered**	Actara	Admire	Intrepid Confirm	SpinTor Entrust
Shorter rinse needed		Apply as drench; irrigate before and after	Shorter rinse needed; multiple apps	Shorter rinse needed
	High residual	High residual	High residual	Low residual
	No Zone II		Intrepid: no Zone II	
Effective only on spring cranberry weevil—not summer	Effective on both spring and summer weevil populations	Target eggs as hatch; monitor colaspis adults with sweeps and oriental beetle with traps	Must target small caterpillars; in summer use pheromone traps to target first flight and egglaying	
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