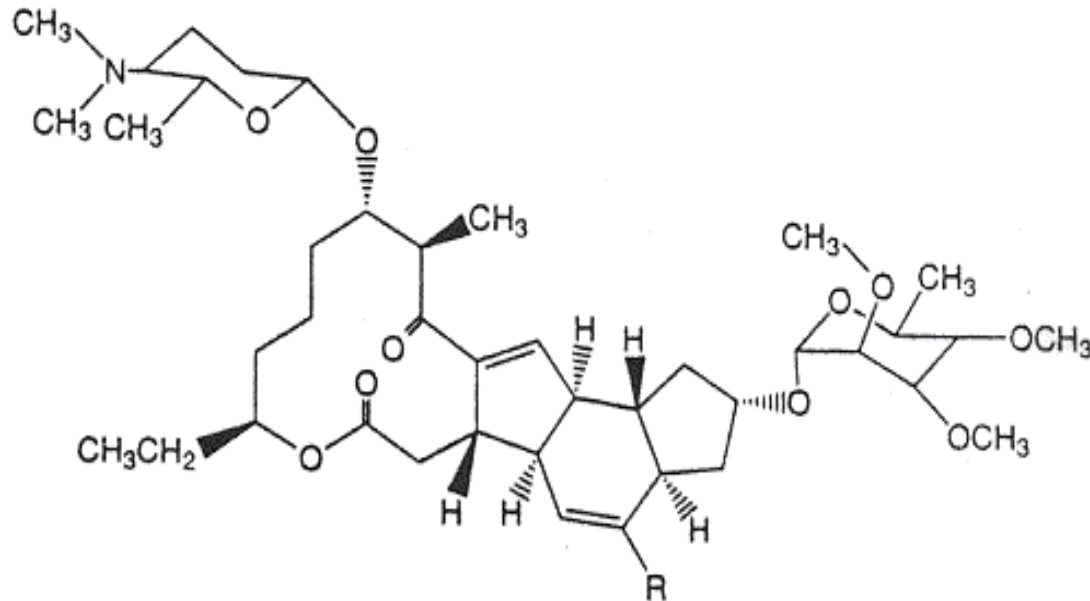


Reduced-Risk Insecticides



Spinosad (Success®)

Reduced-Risk Pesticides Initiative

- Both biological and conventional pesticides are eligible.
- A Reduced-Risk pesticide is defined as one which may reasonably be expected to accomplish the following:
 - (1) reduces pesticide risks to human health;
 - (2) reduces pesticide risks to non-target organisms;
 - (3) reduces the potential for contamination of valued, environmental resources, or
 - (4) broadens adoption of IPM or makes it more effective.

Reduced-Risk Insecticides Presently Registered on Desert Crops

Trade name	Common name	Chemical class
Success Avaunt Confirm Intrepid	spinosad indoxacarb tebufenozide methoxyfenozide	macrocyclic lactone oxadiazine molting hormone agonists molting hormone agonists
Courier Knack	buprofezin pyriproxyfen	chitin synthesis inhibitor juvenile hormone mimic
Assail Fulfill	acetamiprid pymetrozine	neonicotinoid pyridine azomethine

Economic Efficacy of Reduced-Risk Products on Desert Pests

	Worms	WF	LM	Beetles	Aphids	Thrips
Success	● ● ●		● ● ●			● ● ●
Avaunt	● ● ●					
Confirm	● ● ●					
Intrepid	● ● ●					
Knack		● ● ●				
Courier		● ● ●				
Assail		● ● ●		● ● ●	● ● ●*	
Fulfill		● ●			● ● ●*	

Neonicotinoid Compounds

1st Generation

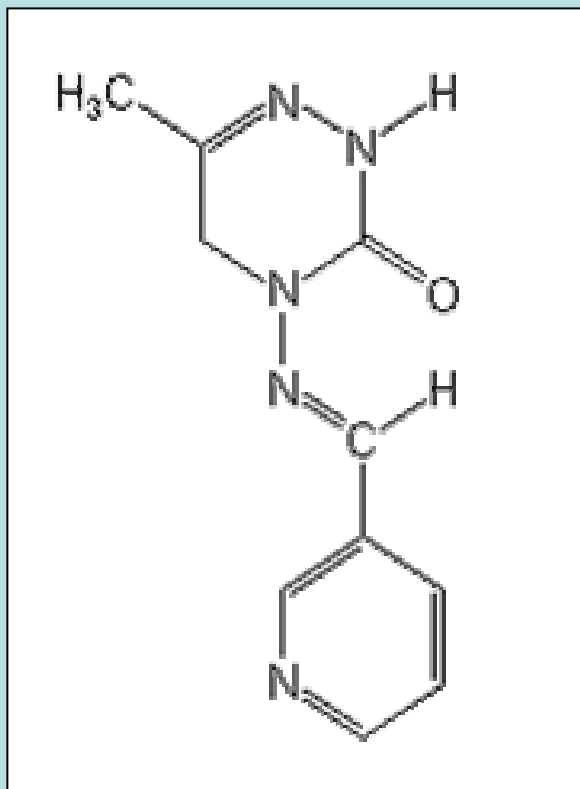
- Imidacloprid
- Acetamiprid (RR)
- Nithiazine

2nd Generation

- Desmethylthiamethoxam
- Nitenpyram
- Thiacloprid (RR)
- Thiamethoxam
- Clothianidin

Pseudo-nicotinoids

- Dinotefuron
- Flonicamid (RR)



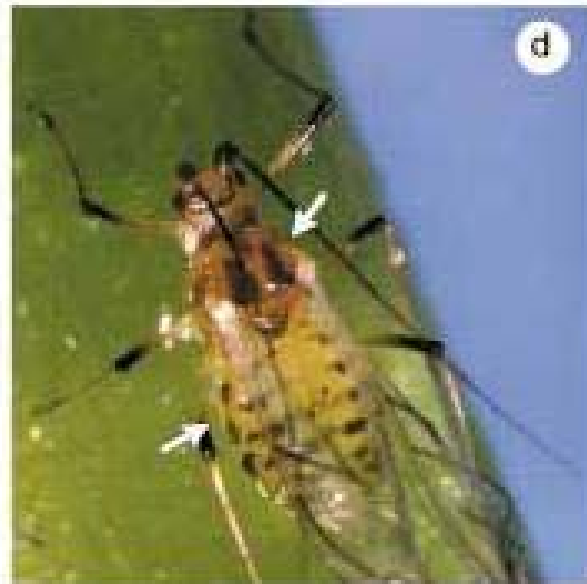
Pymetrozine (Fulfill®)

- pyridine azomethine
- Antifeedant compound
- Translaminar / systemic
- Reduced-risk insecticide

Economic Efficacy of Reduced-Risk Products on Desert Pests

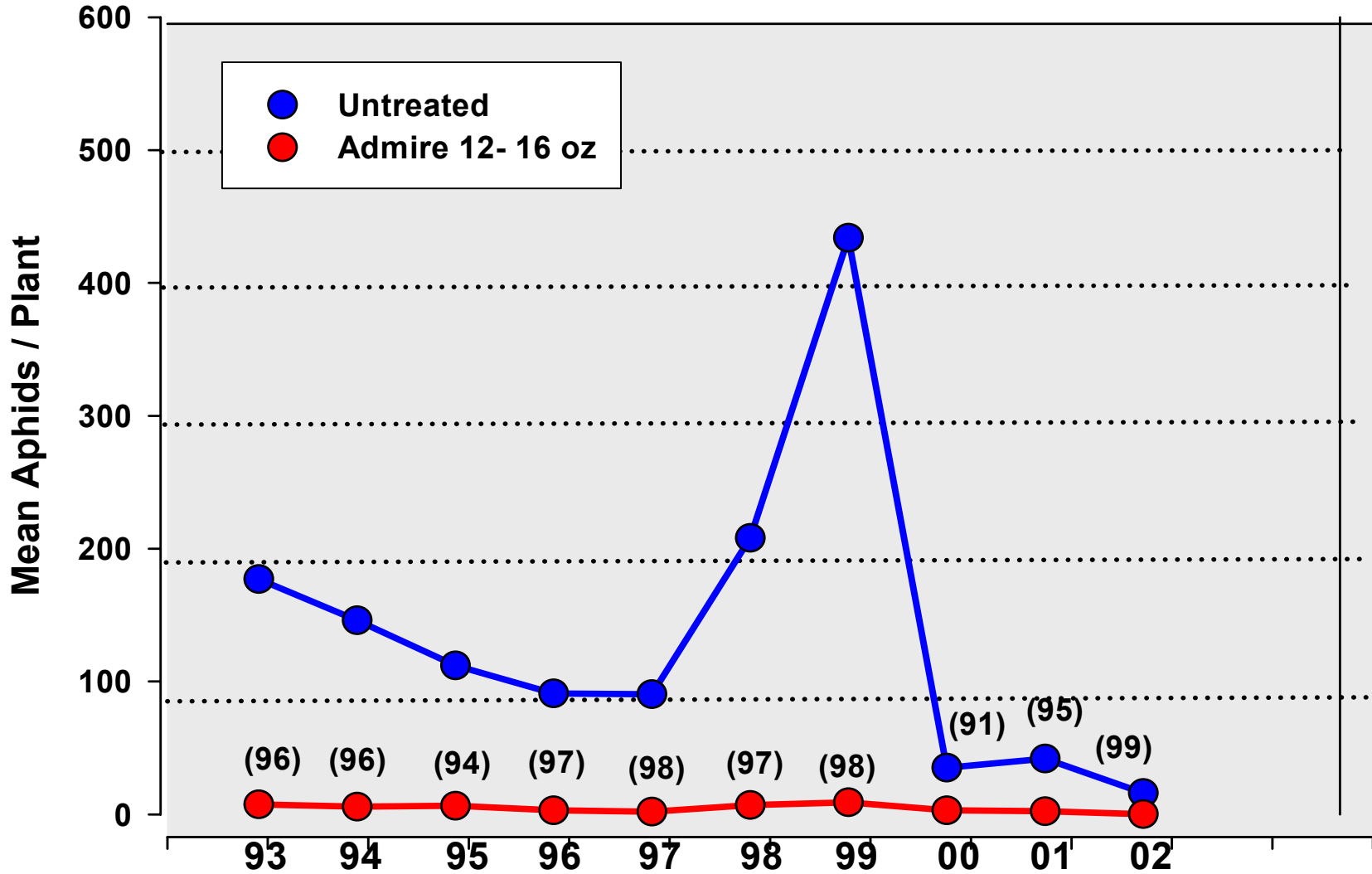
	Worms	WF	LM	Beetles	Aphids	Thrips
Success	● ● ●		● ● ●			● ● ●
Avaunt	● ● ●					
Confirm	● ● ●					
Intrepid	● ● ●					
Knack		● ● ●				
Courier		● ● ●				
Assail		● ● ●		● ● ●	● ● ●*	
Fulfill		● ●			● ● ●*	

Desert Aphid Complex on Lettuce



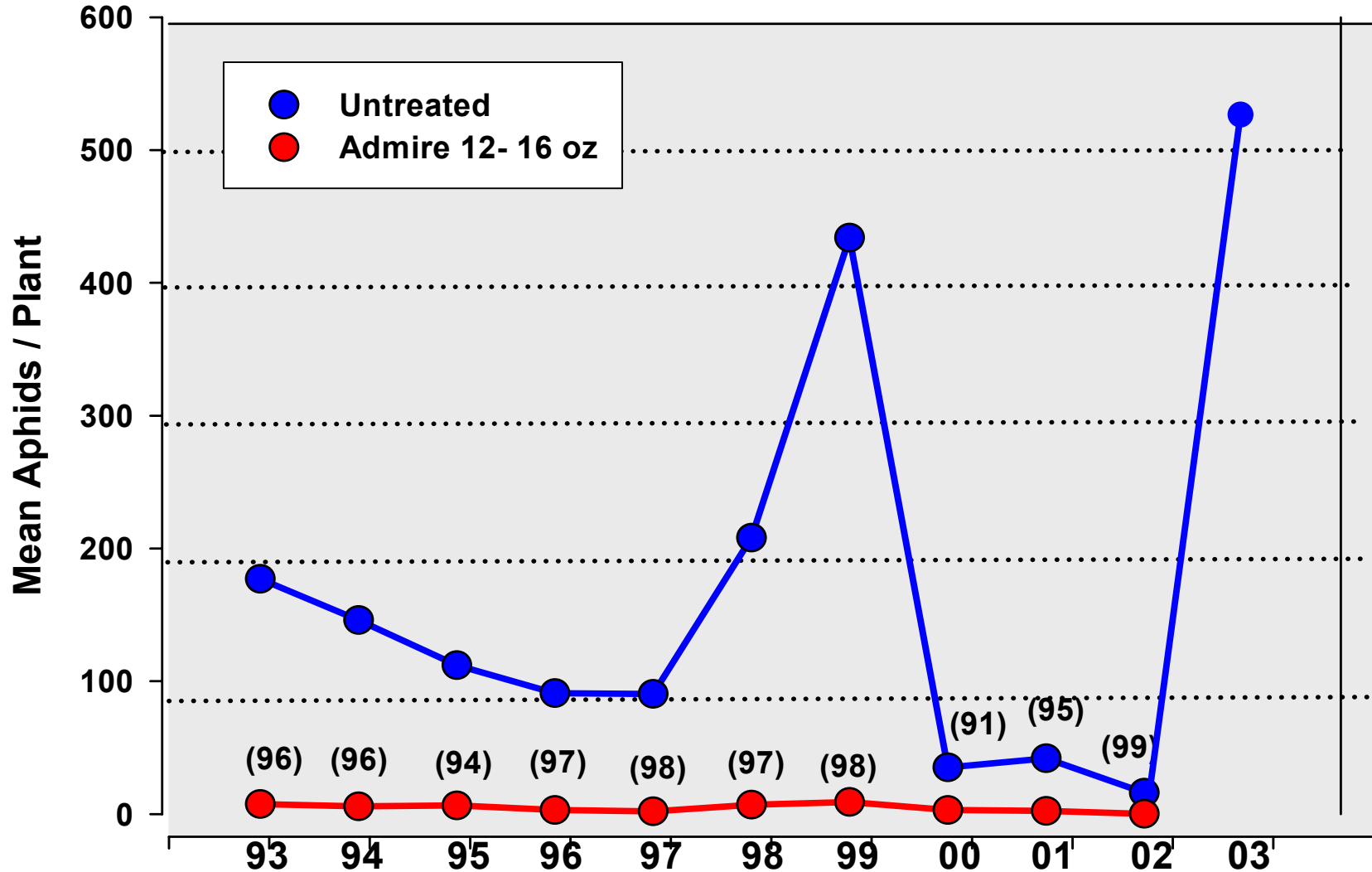
10 Years of Admire in the Desert

Green Peach / Potato / *A. lactucae* Complex – Harvest Infestations



10 Years of Admire in the Desert

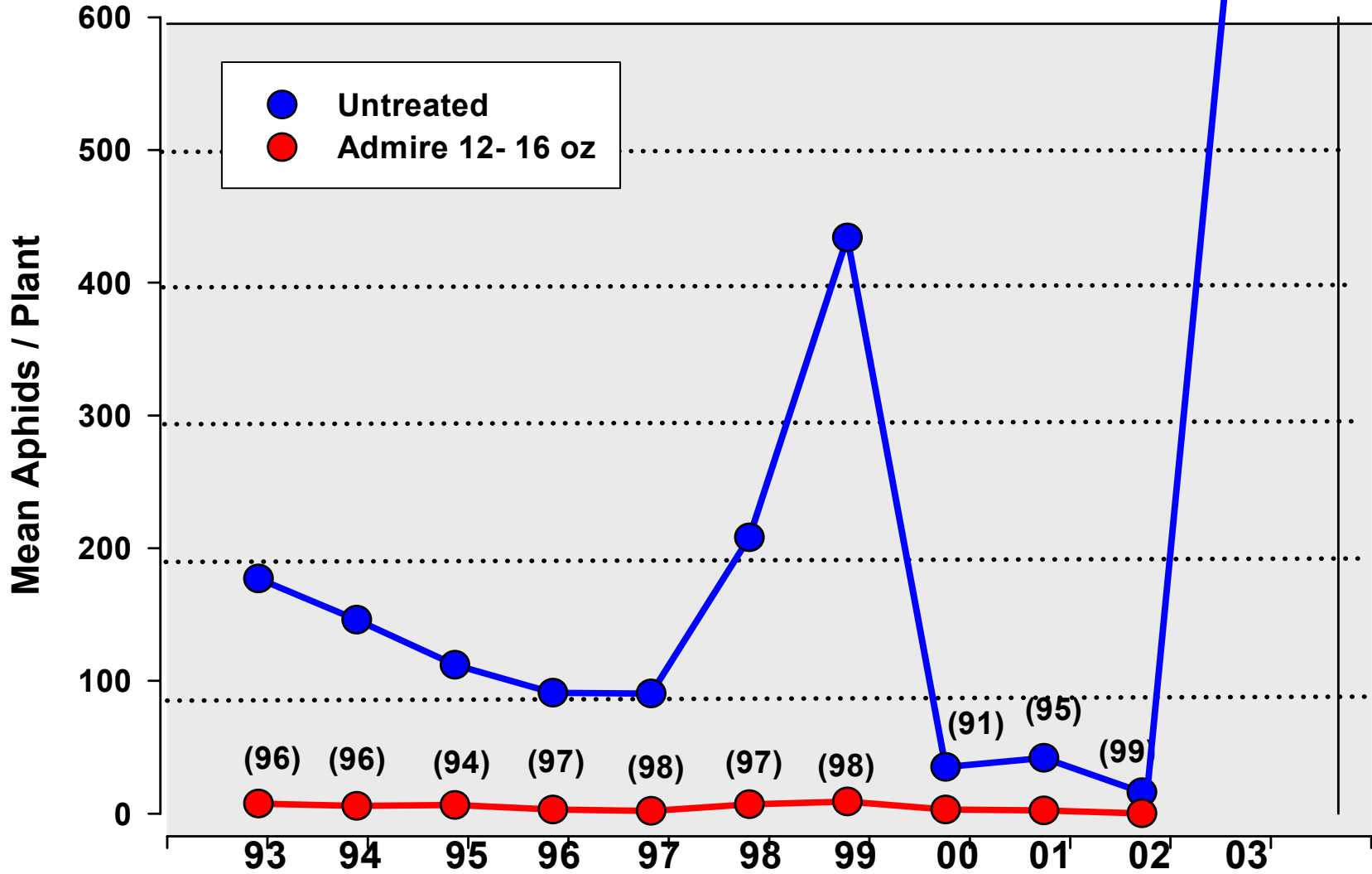
Green Peach / Potato / *A. lactucae* Complex – Harvest Infestations



10 Years of Admire in the Desert

781

Total Aphid Complex – Harvest Infestations



**Foxglove Aphid,
*Aulicorthum solani***





A close-up photograph of a green lettuce leaf heavily infested with numerous light green aphids. The aphids are scattered across the leaf surface, with a higher concentration in the upper left and middle sections. They are small, pear-shaped insects with long antennae and legs. The leaf's veins are clearly visible, and the overall color is a vibrant green.

Acyrthosiphon lactucae
the other “Lettuce” aphid

Comparison of Neonicotinoid Insecticides For Aphid & Thrips Control in Head Lettuce

- Nov 14 wet date
- 3 Sprays (Jan 21, Feb 4, Feb 16)
- Threshold:
 - 1st colonization = 0.7 aphids /plant
 - 11 % plant infested >1 aphid
- Mar 6 - Harvest