

## Reason 500 SC Fungicide

Luc Bourgeois, Bayer CropScience, #3 - 35 Crawford Cres., Campbellville, ON L0P 1B0

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### REASON<sup>®</sup> 500 SC Fungicide

- Common Name
  - Fenamidone
- Chemical Family
  - Imidazolinone
- Resistance Management
  - Group 11
  - QoI, Respiration inhibitor

CN1C(=O)N(C1)C(=O)N(C)C2=CC=CC=C2

The chemical structure of Fenamidone is shown, featuring a central imidazolinone ring system with a phenyl group, a methyl group, and a methylsulfanyl group.

### REASON<sup>®</sup> 500 SC Fungal Activity

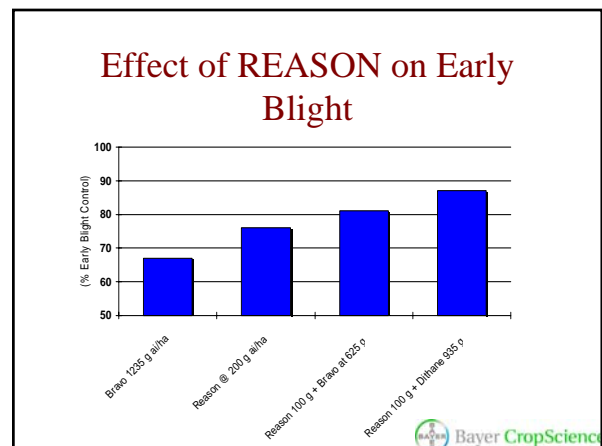
- Zoospore liberation
- Direct cyst & sporangial germination
- Antisporulant

### Fenamidone Crops and Diseases

Potatoes	■ Late blight ( <i>Phytophthora infestans</i> )
	■ Early blight ( <i>Alternaria solani</i> )
Tomatoes	Late blight ( <i>Phytophthora infestans</i> )
	Early blight ( <i>Alternaria solani</i> )
Cucurbit crops	Downy mildew ( <i>Pseudoperonospora cubensis</i> )
Bulb Vegetables	Downy mildew ( <i>Peronospora destructor</i> )
Lettuce	Downy mildew ( <i>Bremia lactuca</i> )

### Unique REASON Features

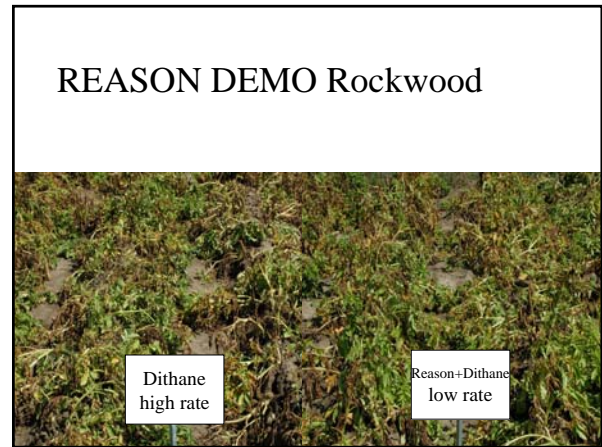
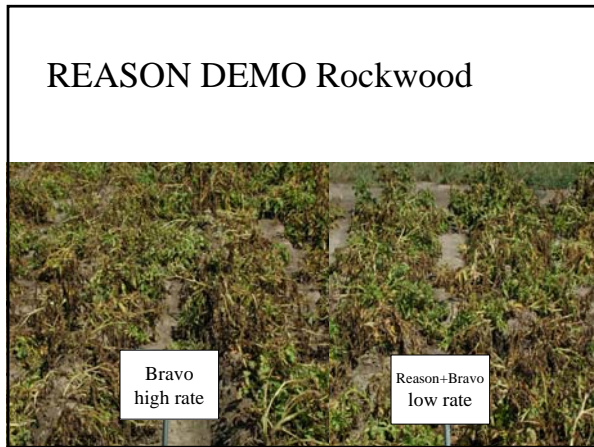
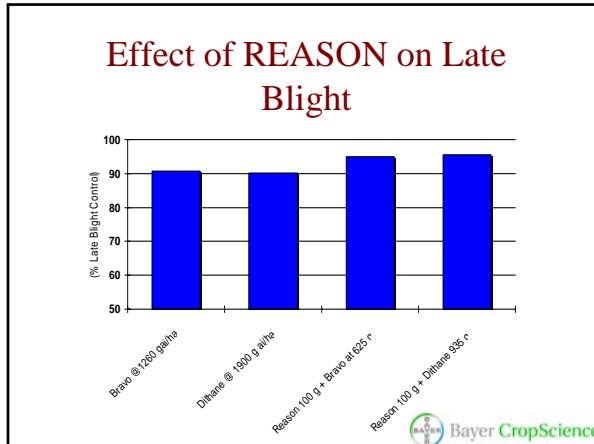
- Translaminar & local systemic activity
- Synergistic activity in combination with low rates of prophylactic treatments



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### REASON DEMO Rockwood

Treatment	29 Aug		9 Sept		6 Oct*	
	Incidence	Severity	Incidence	Severity	Total	Marketable
Reason+Dithane (Mancozeb)	35	2	35	2	14.1	13.4
Reason+Bravo (Chlorothalamb)	35	2	45	3	14.1	13.4
Bravo (Chlorothalamb)	61	2	65	6	13.9	13.1
Dithane (Mancozeb)	33	1	60	4	14.2	13.4
Untreated	90	4	100	41	12.8	11.8

\*Yield in t/ha

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### Minor Use Opportunities Downy Mildew

Treatment	Mean No. of leaves/plant with downy mildew	% Incidence of downy mildew <sup>1</sup>
Untreated	5.2 a	100 a
Reason	2.4 cd	95 a
Previcur	3.4 b	100 a
Aliette	2.7 bcd	95 a
Ridomil	3.0 bc	97.5 a

Mike Cellietti, OMAF, 2003 – Spinach trial

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### Ecotox Info

- Very low toxicity to bees
- Considered harmless to other arthropods
- Practically non-toxic to birds and other wildlife
- No LOC's were exceeded for freshwater fish or invertebrates



### Regulatory Status

- Fully registered in Canada (but not in US)
- Currently late blight only, early blight submission in process, likely in time for season
- Aerial application submission being compiled
  
- Due to trade risks for processors, BCS will not launch Reason until EPA approval in-hand
  - on EPA workplan for June, 2004



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