



Cyflufenamid  
MILTREX<sup>®</sup>

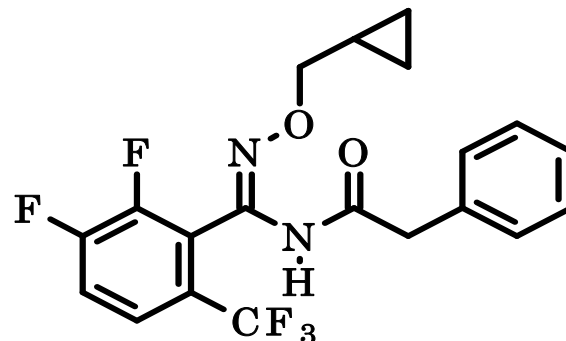
A New Fungicide  
for Control of Powdery Mildew

IR-4 Food Use Workshop  
Cleveland - 2009



# Cyflufenamid MILTREX<sup>®</sup>

- Cyflufenamid (NF-149) is a new fungicide for control of a wide range of powdery mildews on various crops
- New chemical class discovered in 1995 by Nippon Soda Co., Ltd.
- No cross resistance to existing powdery mildew products
  - Biochemical MOA not yet defined
  - FRAC Code U6

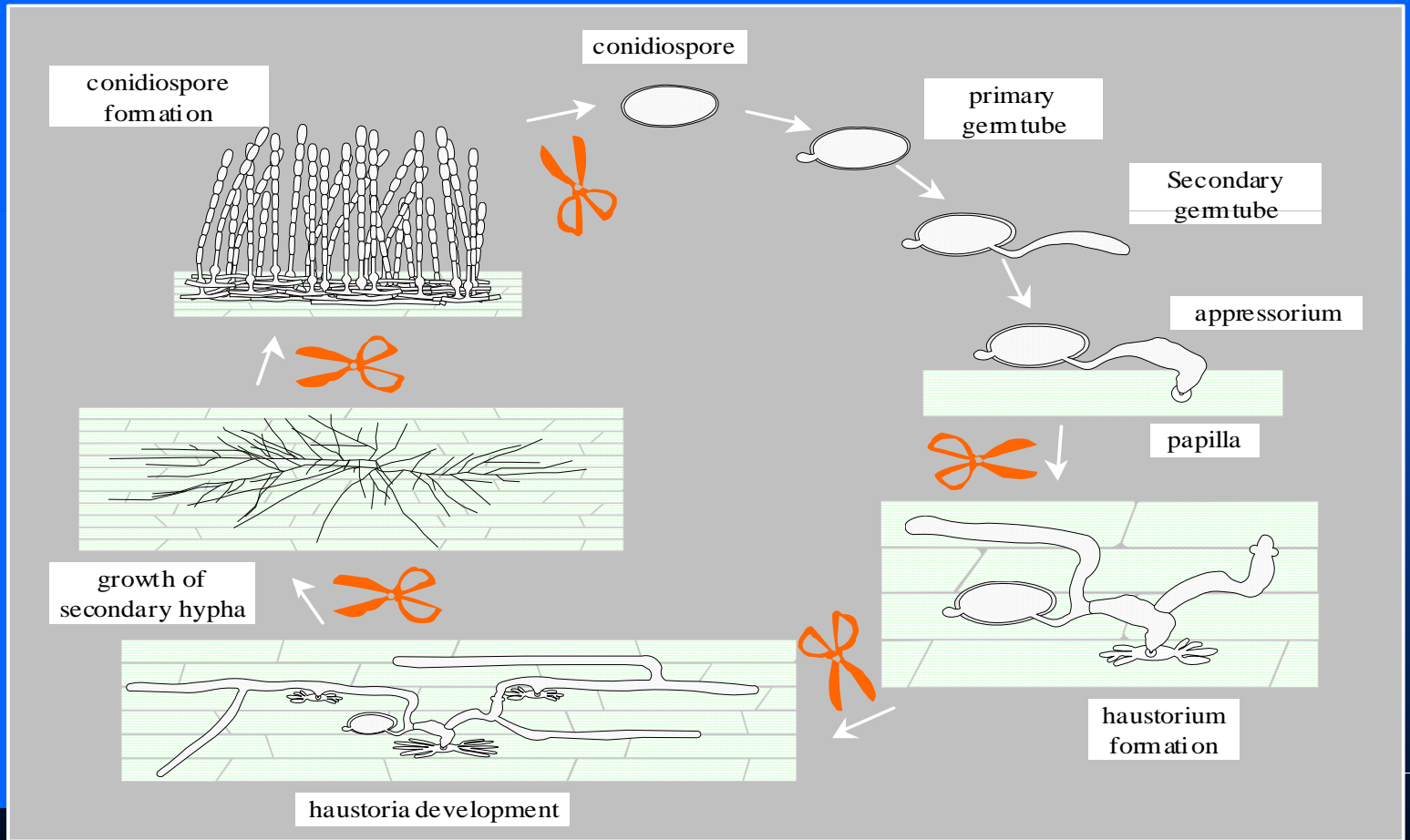


Cyflufenamid



MILTREX®

**Fig. 3 Inhibition sites of cyflufenamid on life cycle of *Erysiphe graminis***



## Effect of Cyflufenamid Against Powdery Mildews on Various Crops

(greenhouse screening, minimum inhibitory concentration)

<b>Crop</b>	<b>Pathogen</b>	<b>MIC(ppm)</b>
Wheat	<i>Blumeria graminis</i> f.sp. <i>tritici</i>	< 0.8
Cucumber	<i>Sphaerotheca cucubitae</i>	< 0.8
Strawberry	<i>Sphaerotheca aphanis</i> var. <i>aphanis</i>	< 0.8
Sweet pepper	<i>Oidiopsis sicula</i>	< 0.8
Apple	<i>Podosphaera leucotricha</i>	< 1.6
Persimmon	<i>Phyllactinia kakicola</i>	< 1.6
Grape	<i>Uncinula necator</i>	< 1.6
Rose	<i>Sphaerotheca pannosa</i>	< 1.6

## Effect of Cyflufenamid Against a Powdery Mildew Strain Resistant to other Commercial Fungicides (greenhouse screening, minimum inhibitory concentration)

Pathogen	Commercial fungicides	Sensitivity	Commercial fungicide MIC(ppm)	cyflufenamid MIC(ppm)
<i>Sphaerotheca cucurbitae</i>	kresoxim-	<b>S</b>	<b>&lt; 0.1</b>	<b>&lt; 0.8</b>
	methyl	<b>R</b>	<b>&gt; 100</b>	<b>&lt; 0.8</b>
	triflumizole	<b>S</b>	<b>&lt; 0.1</b>	<b>&lt; 0.8</b>
		<b>R</b>	<b>5</b>	<b>&lt; 0.8</b>
	thiophanate-	<b>S</b>	<b>1</b>	<b>&lt; 0.8</b>
	methyl	<b>R</b>	<b>&gt; 100</b>	<b>&lt; 0.8</b>



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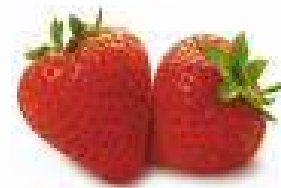
- Currently registered in Japan, Korea, and the EU
  - Cereals, fruiting vegetables, pome fruit, stone fruit
  - Favorable toxicological, e-fate, and eco-tox profile
- US EPA Registration pending
  - Expected launch in the Spring of 2011
- US brand name: MILTREX<sup>®</sup>
- Formulation: 10% SC (suspension concentrate)
- Toxicity Category III, CAUTION signal word
- Low Use Rate: 0.01 to 0.02 lb a.i./A  
(1.7 to 3.4 oz form./A)

*Nisso*

# Cyflufenamid

## MILTREX<sup>®</sup> Initial Crops for the US

- |  | <u>PHI</u> |
|--|------------|
| • Grapes (and climbing vine small fruit except fuzzy kiwifruit); | 3 day      |
| • Pome fruit crop group;   | 14 day     |
| • Cucurbit crop group;   | 0 day      |
| • Strawberries (and other low growing berries);                  | 0 day      |





# Cyflufenamid MILTREX®

- Other potential crop uses include:
  - Stone fruit
  - Fruiting vegetables
  - Leafy vegetables
  - Cole crops
  - Hops
  - Cane berries
  - Grains
- Potential Non Crop Uses Ornamentals (outdoors)

