

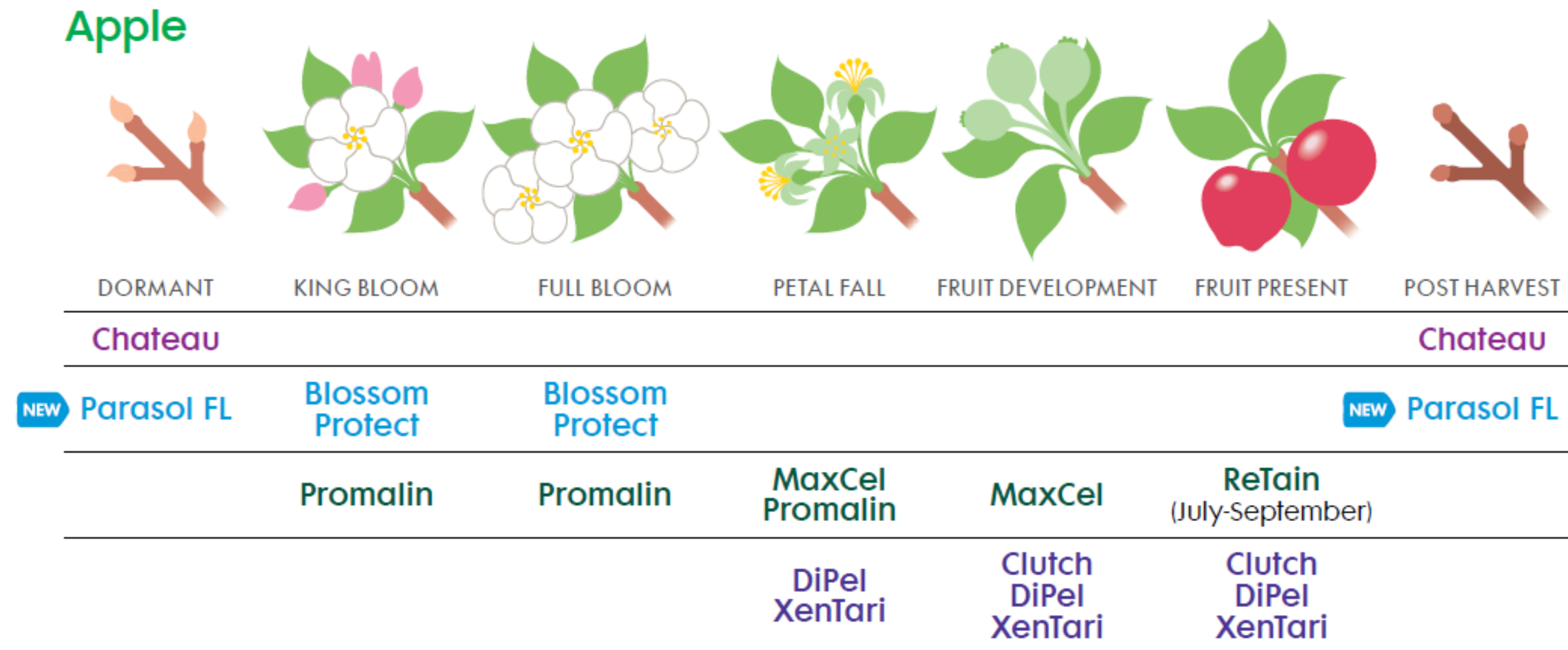
# Nufarm/Valent OMAFRA Spring Apple Thinning Meeting

April 29, 2019



**Nufarm**  
Grow a better tomorrow

# Nufarm Apple Program



# Chateau<sup>®</sup> WDG

**RESIDUAL CONTROL OF TOUGH  
BROADLEAF AND GRASS WEEDS**

## **TECHNICAL INFORMATION**

### **HERBICIDE GROUP**

> Group 14

### **ACTIVE INGREDIENTS**

> Flumioxazin 51.1%

### **PACKAGING**

> 4 x 1.13 kg case

### **RAINFAST**

> Requires ½ inch of rain  
or irrigation for activation

### **PCP #**

> 29231



Grow a better tomorrow

# Chateau Herbicide

113g/ac on coarse textured soils with <5% OM

170g/ac on medium textured soils with <5% OM

- Moisture necessary for activation
  - ½ inch rain or irrigation
- Should be applied as a uniform broadcast application to the orchard floor or as a band directed at the base of the trunk
- Should be tank mixed with glyphosate for control of emerged weeds
- Do not apply after budbreak unless using a hooded or shielded boom



# Parasol<sup>®</sup> FL

ONE OF THE SMALLEST AND MOST CONSISTENT COPPER  
PARTICLE SIZE FORMULATIONS AVAILABLE

## TECHNICAL INFORMATION

### CHEMICAL CLASS

> M1 fungicide

### ACTIVE INGREDIENTS

> Copper hydroxide 24.4%

### PACKAGING

> 2 x 10 L case

### RAINFAST

> 2 hours

### PCP #

> 25901

# Parasol® FL

Now Registered on Tree Fruit including:

- **Apple and Pear**
  - Fire Blight (*Erwinia amylovora*)
  - Bacterial Blight (*Pseudomonas syringae*)
- **Apricots**
  - Coryneuym blight (*Coryneum carpophillum*)
- **Cherries**
  - Bacterial Canker (*Pseudomonas spp.*)
- **Nectarine and Peach**
  - Coryneum Blight (*Coryneum carpophilum*)
  - Leaf Curl (*Taphrina deformans*)

## TECHNICAL INFORMATION

### CHEMICAL CLASS

> M1 fungicide

### ACTIVE INGREDIENTS

> Copper hydroxide 24.4%

### PACKAGING

> 2 x 10 L case

### RAINFAST

> 2 hours

### PCP #

> 25901

# Parasol® FL - Apples

- Rate
  - 1.9L/ac
- Application Information:
  - Fall – Apply after 50% leaf drop
  - Spring – Apply at silvertip
  
  - Can make up to 2 applications per year

# Blossom Protect™

**FITS WELL IN A FIRE BLIGHT  
PROTECTION PLAN IN POME FRUIT**

## TECHNICAL INFORMATION

### CHEMICAL CLASS

> N/A – Biological

### ACTIVE INGREDIENTS

> *Aureobasidium pullulans*

### PACKAGING

> 12 kg box: Blossom Protect  
(1.5 kg canister) + Buffer  
Protect (10.5 kg bag)

### RAINFAST

> Avoid application when  
heavy rain is in the forecast

### PCP #

> 30552

BIOLOGICAL FUNGICIDE



Grow a better tomorrow



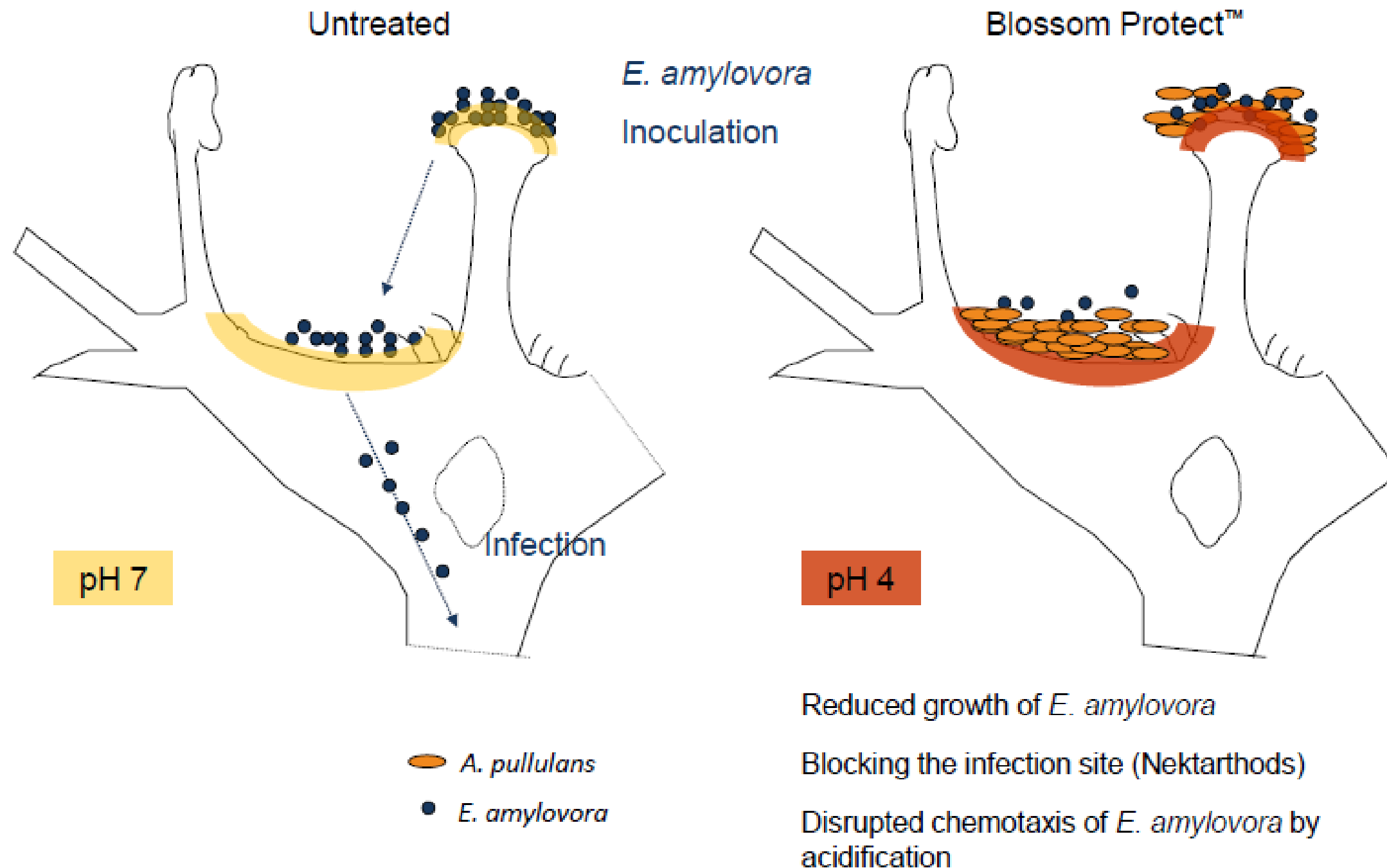
# Blossom Protect

- *Aureobasidium pullulans* is a biological fungicide active against fire blight in apples
- Application timings - up to 5 applications per year during bloom, when conditions favour fire blight
  - Apply the day before predicted infection conditions and follow up 2 days after if infection risk is still high and blossoms are open

# Mode of Action

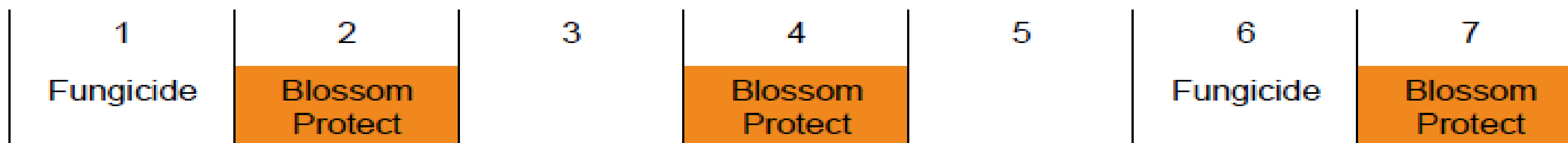
## Antagonism – competition for space/nutrients

Mode of Action:



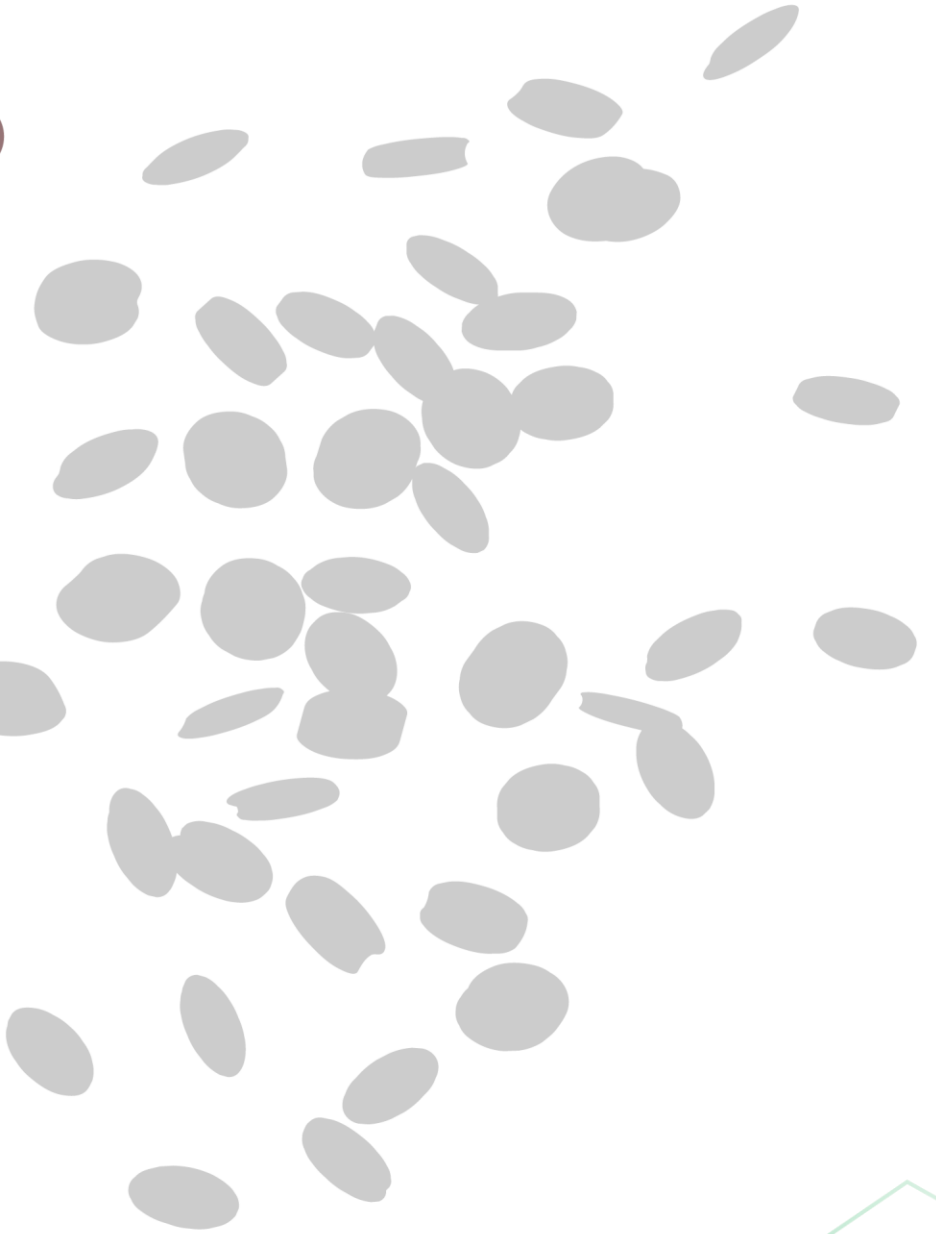
# What about scab control products?

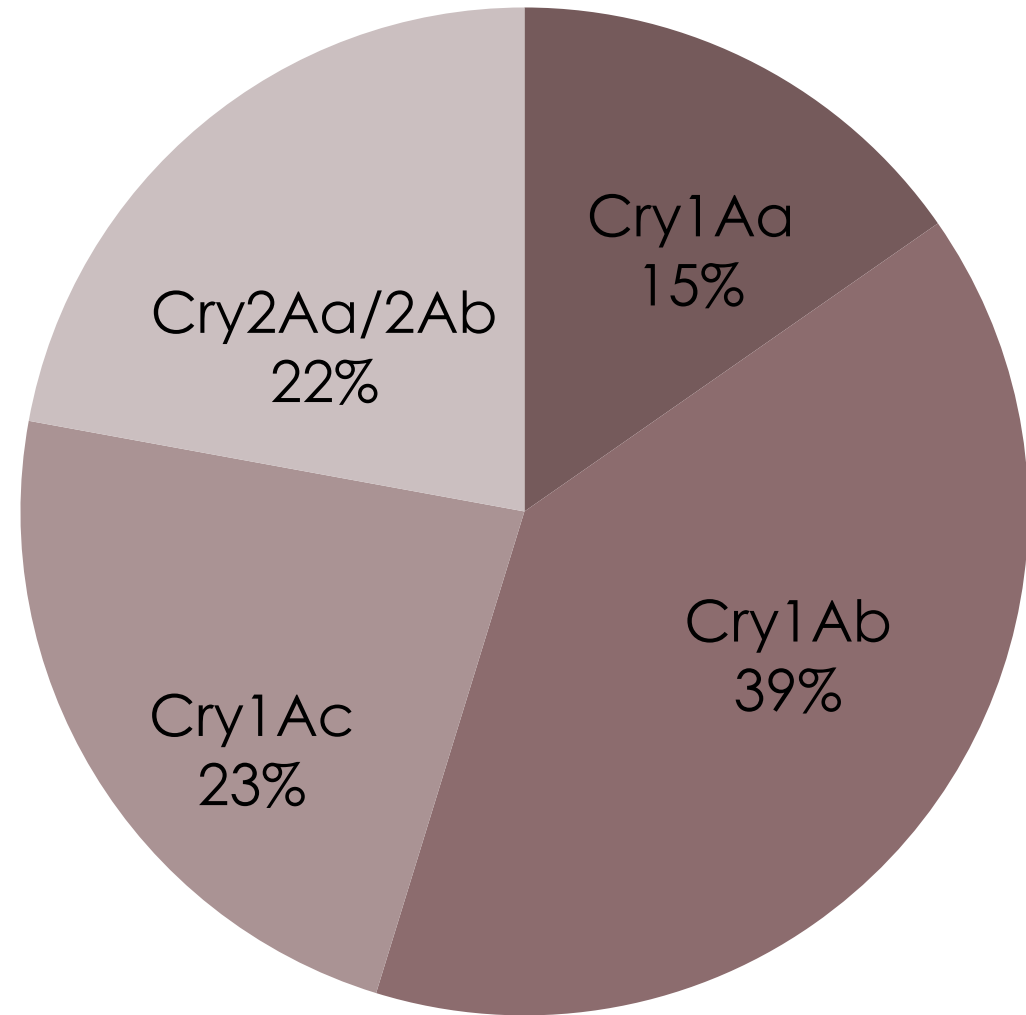
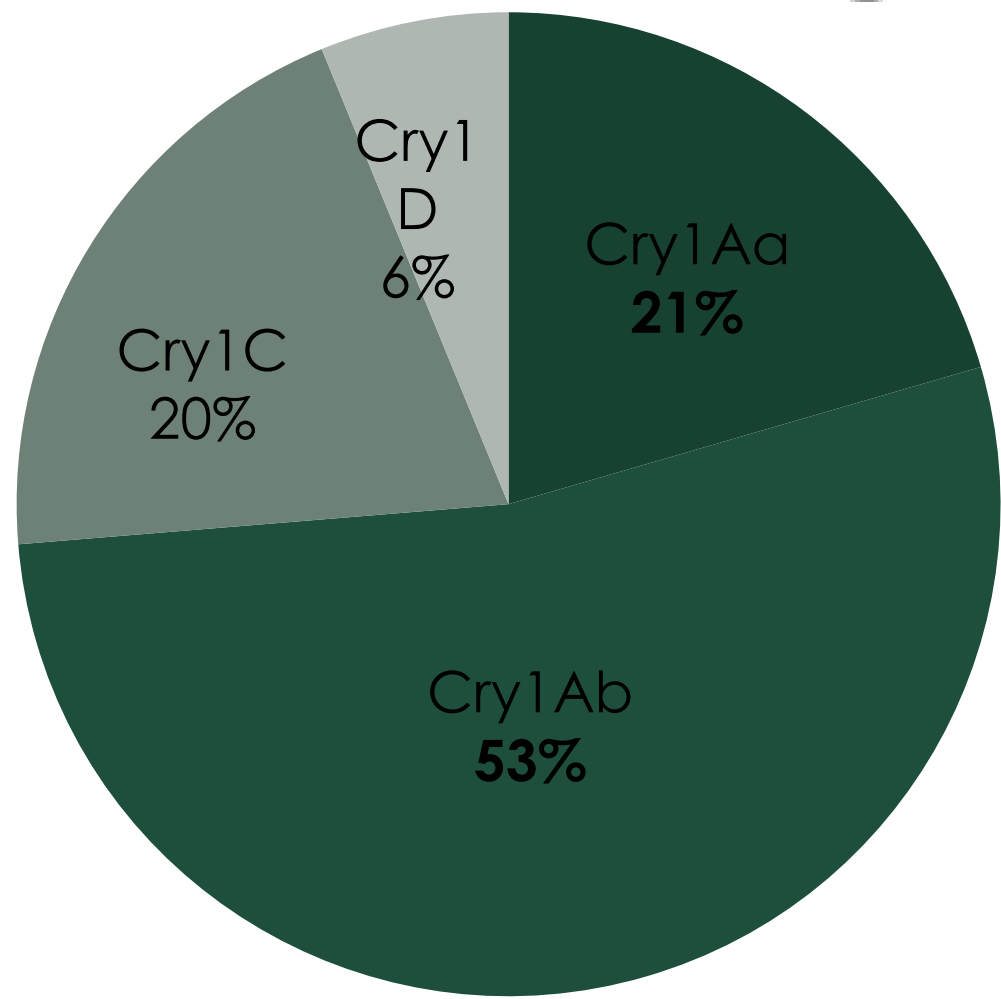
- Can be tank mixed with:
  - Sulfur products
  - Anilinopyrimidines (Cyprodinil, Pyrimethanil and Mepanypirim)
  - Some sterolbiosynthesis inhibitors (Penconazol, Fluquinconazol)
- Other fungicides have to be applied separately from Blossom Protect, 1 day before or 2 days after.
  - Captan, dithianon, lime sulfur, strobilurines, difenoconazol etc.



XenTari

NEW! Biological  
Insecticide

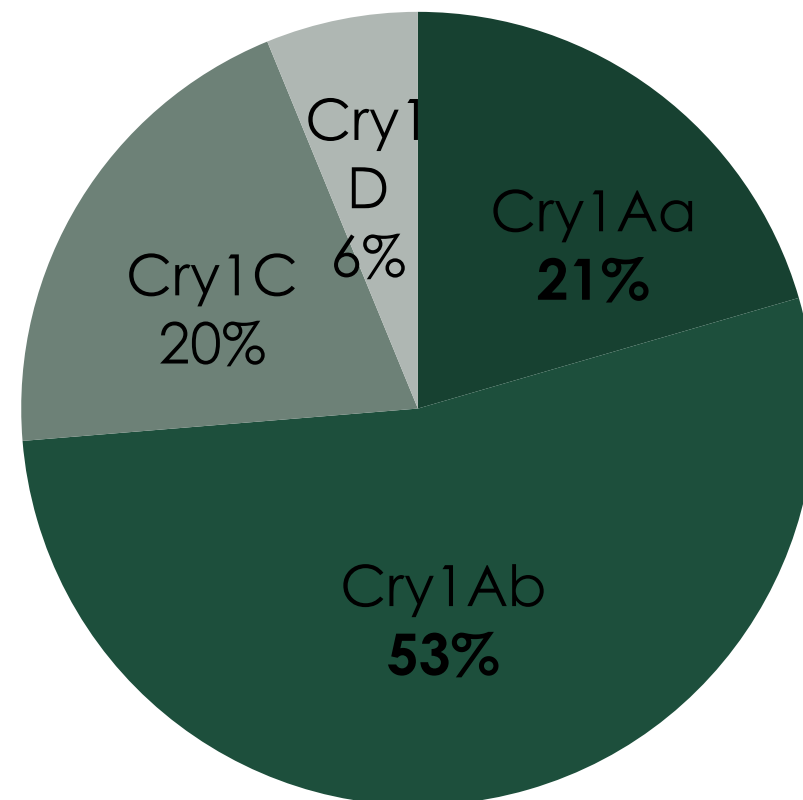




# XenTari® WG

BIOLOGICAL INSECTICIDE

WETTABLE GRANULE



## Additional insecticidal components:

- **VIP3A** – soluble Cry-like insecticidal protein
- **Spores** – invade the insect body
- **PD-100** – soluble Cry toxin synergist

## *Bacillus thuringiensis aizawai*, strain ABTS 1857

XenTari contains a specialized ratio of Cry-toxin proteins that provide highly effective control of armyworm and diamondback moth.

### Key Lep. species:



*Spodoptera frugiperda*  
Fall army worm



*Spodoptera eridania*  
Southern armyworm



*Plutella xyostella*  
Diamondback moth

# XenTari – application information and insects controlled

**Rate:** 202-648g/ac

**Timing:** at pink stage and if populations are heavy at petal fall

Applications may need to be made on a weekly basis

## Pome Fruit

- Cankerworms
- Codling moth
- Fruittree, oblique-banded, redbanded, varigated leafroller
- Oriental fruit moth
- Tufted apple budworm
- Winter moth

## Stone Fruit

- Cankerworks
- Varigated, fruittree and oblique-banded leafroller
- Oriental fruit moth

# Clutch<sup>®</sup> 50 WDG

**PROVIDES FAST ACTING, LONG LASTING,  
BROAD-SPECTRUM CONTROL OF TOUGH  
PESTS IN A VARIETY OF CROPS**

## **TECHNICAL INFORMATION**

### **CHEMICAL CLASS**

> Group 4A

### **ACTIVE INGREDIENTS**

> Clothianidin 50%

### **PACKAGING**

> 6 x 680 g case

### **RAINFAST**

> For foliar applications  
avoid application when  
heavy rain is in the forecast

### **PCP #**

> 29382



Grow a better tomorrow



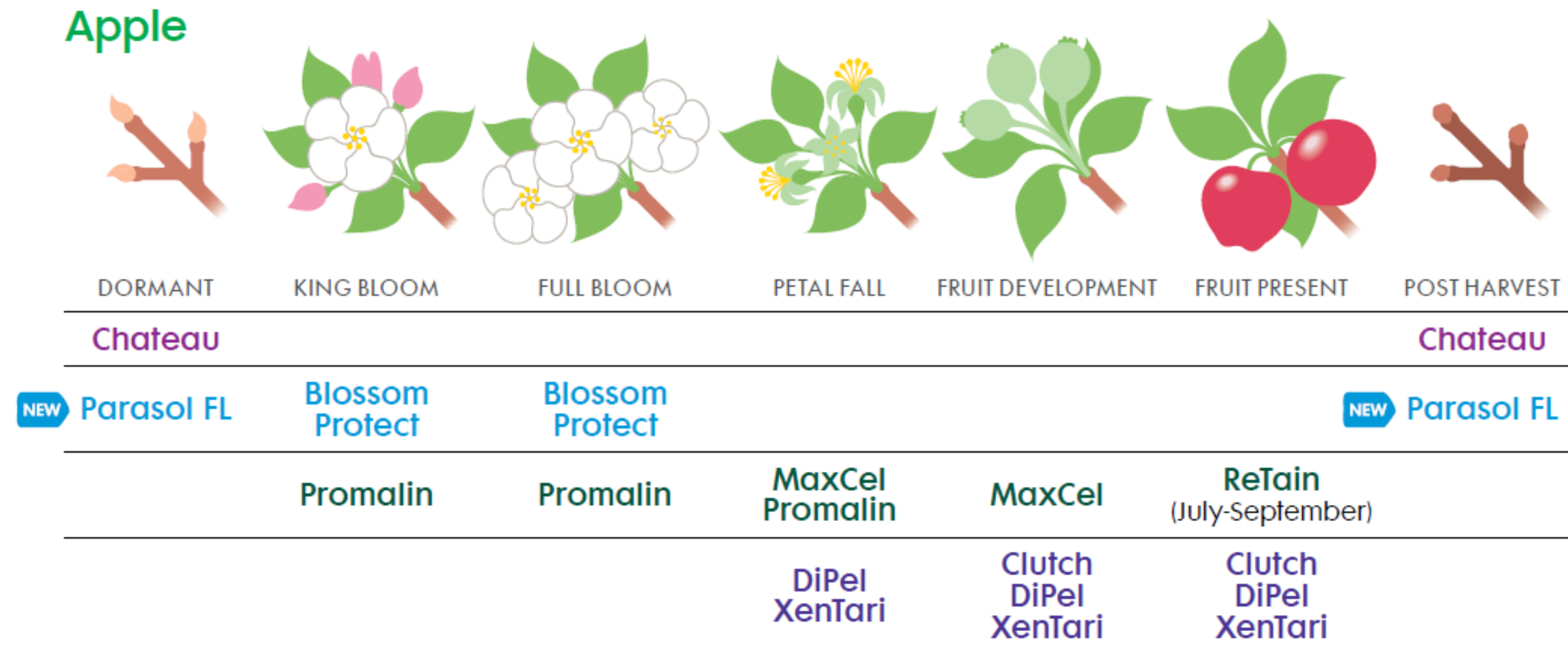
# Clutch in Apples

INSECT CONTROLLED	RATE	PHI	APPLICATION INFORMATION
<b>APPLE, CRABAPPLE, LOQUAT, MAYHAW, ORIENTAL PEAR, PEAR, QUINCE</b>			
Aphids Leafhoppers	140-210 g/ha (56.7-85 g/ac.)	7	<p>Apply after petal fall and prior to insect populations reaching damaging thresholds or prior to damage caused by stings or tunneling occurs</p> <p>If pest pressure continues, follow up with a second application 10-14 days later for all pests except Oriental fruit moth and Codling moth (observe a 14-day interval for these pests)</p> <p>Apply Clutch post-bloom only</p> <p>Do not apply more than 2 applications per season and do not exceed 420 g/ha/season</p>
Brown marmorated stink bug (suppression only)	210-420 g/ha (85-170 g/ac.)		
Codling moth (suppression only) Oriental fruit moth	210-420 g/ha (85-170 g/ac.)		
Leafminers	140-210 g/ha (56.7-85 g/ac.)		
Pear psylla	280-420 g/ha (113.4-170 g/ac.)		
Plum curculio	210 g/ha (85 g/ac.)		

# PMRA Clothianidin Decision

- The following uses have been cancelled by the PMRA: **strawberry, pome fruit, stone fruit, municipal/residential/industrial turfgrass.**
- Last date of use will be April 2021
  - Some uses granted extension due to lack of alternatives
  - Pome and stone fruit allowed use until April 11, 2022 for BMSB
- The proposed phase-out DOES NOT include sod farms, golf courses, potato, **grapes**, cucurbits
- PLEASE NOTE: This decision only relates to impact on pollinators. The final decision related to the Special Review on impact to aquatic invertebrates is expected in January 2020; the proposed decision for the aquatic invertebrate Special Review calls for the cancellation of all agricultural clothianidin-containing end use products, including seed treatment.
  - This Special Review may result in further uses being proposed for phase-out.

# Nufarm Apple Program



# Thank you!

Alicia Sebastian  
alicia.sebastian@nufarm.com

