



The Chemical Company

**Frank Fornari**  
Ornamental  
Sales Specialist

# Sultan™ Miticide

**An innovative new miticide that's hard on  
spider mites and soft on beneficials**

# Sultan™ Miticide



Sultan™ miticide controls all life stages of Tetranychid (spider) mites – eggs, nymphs, and adults – in ornamentals grown in greenhouses, nurseries, and landscapes.

Sultan is highly effective against mites that have developed resistance to other miticides, showing no indication of cross-resistance.

On contact, Sultan miticide provides good knockdown and long residual activity with excellent plant safety. It also has a favorable toxicological profile and has no observed adverse effects to most non-target and beneficial insects and mites.

**Sultan™**  
miticide



# Sultan™ Miticide



- Unique mode of action for rotation and integrated pest management programs
- Contact efficacy against all life stages of Tetranychid mites
- Rapid, targeted knock-down and long residual activity
- Compatible with most beneficial insects and predaceous mites
- Excellent plant safety with no observed phytotoxicity

# Sultan™ Miticide Grower Benefits



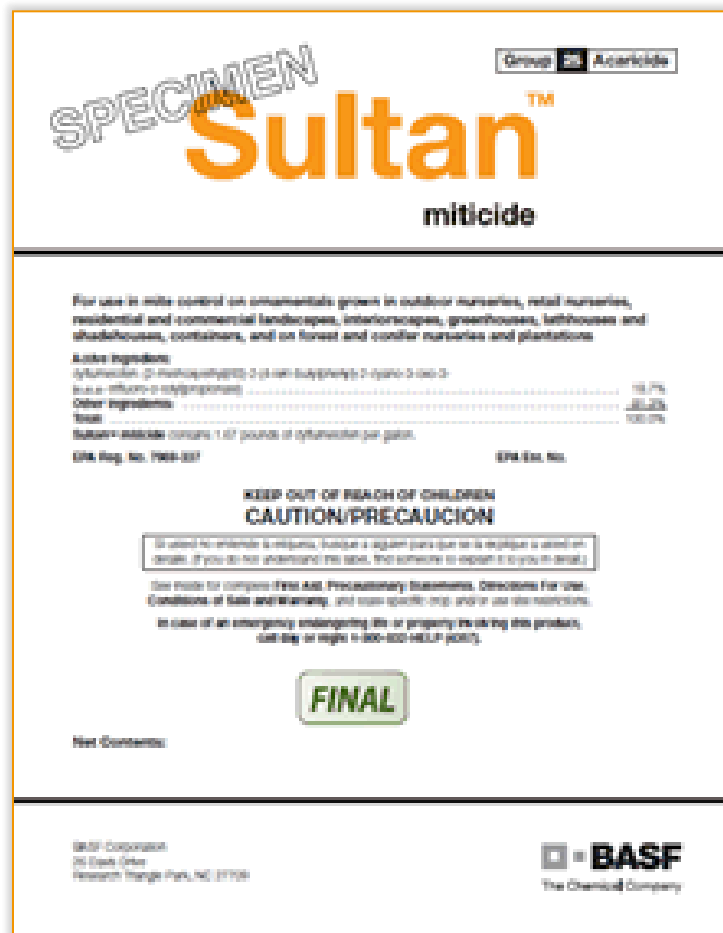
## ■ More Effective Rotation

- With its unique MOA, Sultan is **the new miticide rotation option** for resistance management programs.

## ■ Sustains Beneficials in IPM Programs

- Because Sultan has not shown any negative effects on beneficial insects or predaceous mites, it **helps growers sustain the effectiveness of their IPM programs.**

# Sultan™ Miticide Label Review



- Registered by US EPA May 9, 2014; state registrations in progress
- **CAUTION** Signal Word
- **Personal Protection Equipment (PPE):** Long sleeved shirt and long pants; Chemical resistant water proof gloves; Shoes and socks
- **Restricted Entry Interval (REI – for agricultural uses only):** Greenhouse, nursery, and sod farms = 12 hrs
- No REI for residential or commercial landscapes or interiorscapes = enter sprayed area when foliage is dry

# Sultan™ Miticide Use Sites



Sultan can be used on ornamental plants at the following use sites:

- Nurseries, wholesale and retail, field and container
- Commercial production greenhouses
- Shadehouses and lathhouses
- Landscapes, commercial, public, and recreational gardens
- Other commercial and residential landscape maintenance areas
- Forest tree and conifer nurseries and plantations
- Interiorscapes

# Application & Rates

- Rate: 13.7 fl oz / 100 gal
- Complete coverage is necessary for effective control
- Apply in minimum 100 gal/acre finished spray solution
- Adjuvants can be used and may be necessary for outside uses or hard-to-wet foliage
- Sultan Miticide is rainfast in 1 hour



# Rapid Knockdown

Data show knockdown in:

- 3 hours with direct contact
- 9 hours with indirect exposure

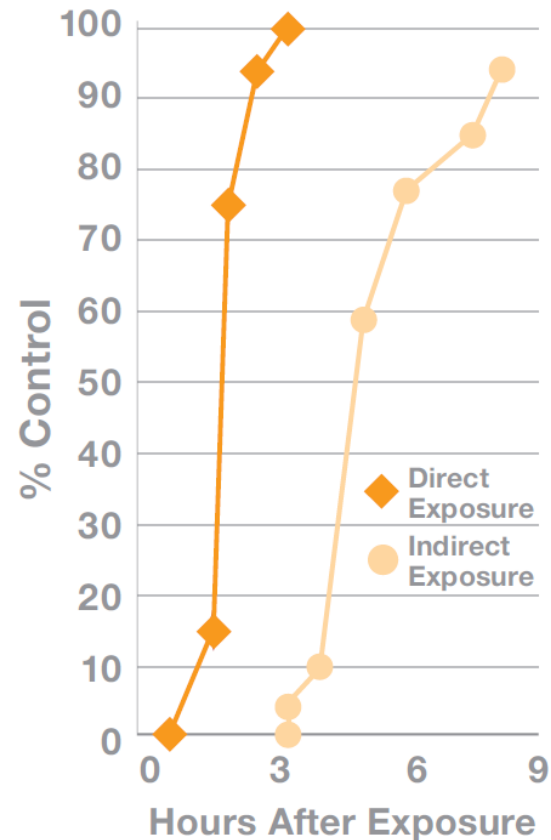
**Proper application (good coverage, etc.)  
has shown control for up to 28 days.**

BASF Laboratory Study, 2011



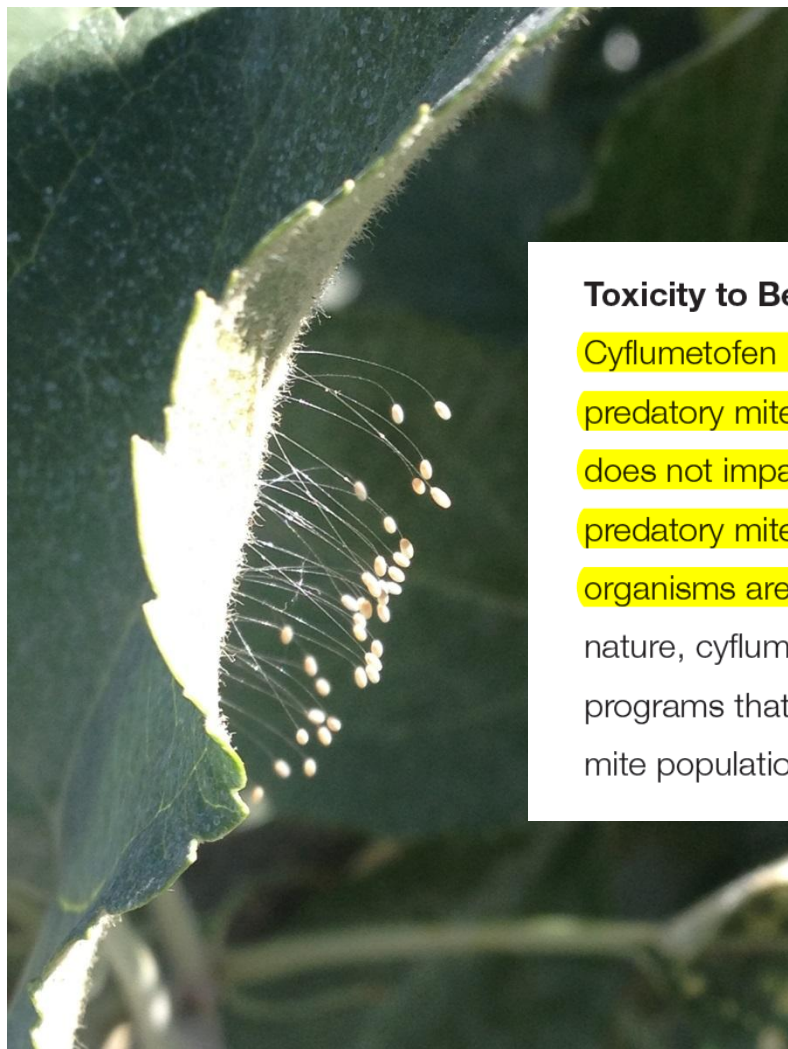
*Sultan* Miticide  
Speed of Control

**Sultan**<sup>TM</sup>  
miticide





# Compatibility with Non-Targets



## Toxicity to Beneficial Insects

Cyflumetofen has been tested against a wide range of beneficial arthropods, including predatory mites. The results from standard laboratory bioassays indicate that cyflumetofen does not impact a variety of non-target arthropod species, including parasitic wasps, predatory mites, predatory bugs, ladybird beetles, rove beetles and lacewings, when the organisms are exposed to fresh residues on inert substrates. Due to its highly selective nature, cyflumetofen will be a good fit in integrated pest management programs, or in programs that release beneficial mites, as it is likely to have little impact on the predatory mite populations.

Lacewing eggs on Apple treated with Cyflumetofen  
Image Credit: Jen Bergh, BASF 2013

# Sultan Plant Safety Trial Summary

- **51 Trials in the US & Europe**
- **Rates Tested:** 13.7 - 56 fl oz/100 applied at 100 gpa
- **Plants Tested:**
  - 16 woody ornamentals
  - 16 flowering plants species
  - 3 foliage species
- **Results:** No evidence of injury at 1X – 4X rates



