

# FLUTIANIL

Fungicide

Product name: GATTEN<sup>®</sup>



OAT Agrico Co., Ltd.

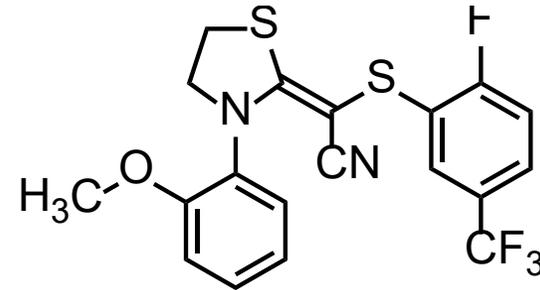
— Tokyo, Japan —

2022 IR-4 meeting



# Flutianil, Characteristics

- New chemical group: cyano-methylene thiazolidine
- Effective in controlling powdery mildew
- **Novel Mode of Action against powdery mildew (FRAC Code U13)**



**We'd like to propose a MOA of flutianil as "functional inhibition of the haustorium"\***

**No Cross-Resistance with other chemical classes**

\*Reference: J Pestic Sci 45(4), 206-2015 (2020)  
J Pestic Sci 26(2), 206-2013 (2021)

# Regulatory Information

- US**
- Reduced risk status granted for all of the registered crops
    - Registered crops: Apples, Cherry Subgroup 12-12A, Berry, low growing subgroup 13-07G, Melon subgroup 9A and Squash/cucumber subgroup 9B, Small fruit, vine climbing, except fuzzy kiwifruit, subgroup 13-07F, Berry, low growing, subgroup 13-07G, and Hops.
- Canada**
- Registered on Cucurbits Crop Group 9, Cherry Subgroup 12-09A and Grape in March 22.
- Japan**
- Registered on Eggplant, Cucumber, Pumpkin and Squash, Watermelon, Melons, Strawberry, Zucchini, Tomato, Peas, Flowers and Ornamental plants, and Trees and Shrubs.
- Korea**
- Registered on Green & Red pepper (Fresh), Strawberry, Watermelon, Cucumber, Korean melon, and Sweet pepper
- EU**
- Approval: Annex I granted April 2019
    - Approved crops: Grapes and Flowers and Ornamental plants



# US Label

- **Type:** Fungicide
- **Product Name:** GATTEN<sup>®</sup>
- **Active ingredient:** Flutianil
- **Formulation:** 5% EC
- **Use rate:** 0.04 lb ai/acre (0.01-0.05 lb ai/acre global)
  - **Note: 0.01 – 0.02 lb ai/A is new targeted use rate**
- **Application:** 3-5 times per season, 7-day interval
- **PHI:** 0-14 days
- **Crops:** Apples, Cherry Subgroup 12-12A, Melon subgroup 9A and Squash/cucumber subgroup 9B, Small fruit, vine climbing, except fuzzy kiwifruit, subgroup 13-07F, Berry, low growing, subgroup 13-07G, and Hops.
  - All granted reduced risk status



# US Label Expansion – IR-4

## ■ Label Expansion with the EPA (submission by IR-4 Oct 2022)

- Lettuce (Head and Leaf including greenhouse)
- Peach
- Mustard Green - completed old study
- Cucumber (Greenhouse)
- Tomato (Greenhouse)
- Eggplant (Greenhouse)
- Pepper (Greenhouse)



# US Label Expansion – STUDIES

- Label Expansion with the EPA (submission target unknown except September 2022 for ornamentals in Canada)
  - Strawberry greenhouse
    - ✓ Submission to PMRA by PMC and to EPA by IR-4 – Studies on-going PMC
  - Ornamental Crop Safety and Efficacy by PMC and IR-4
    - ✓ Submission to PMRA (September 2022) and EPA
  - Rosemary and Sage Efficacy and Crop Safety Only
    - ✓ IR-4 efficacy studies on-going
    - ✓ Not a submission priority for IR-4



# Canada Label Expansion

## ■ Current PMC Studies

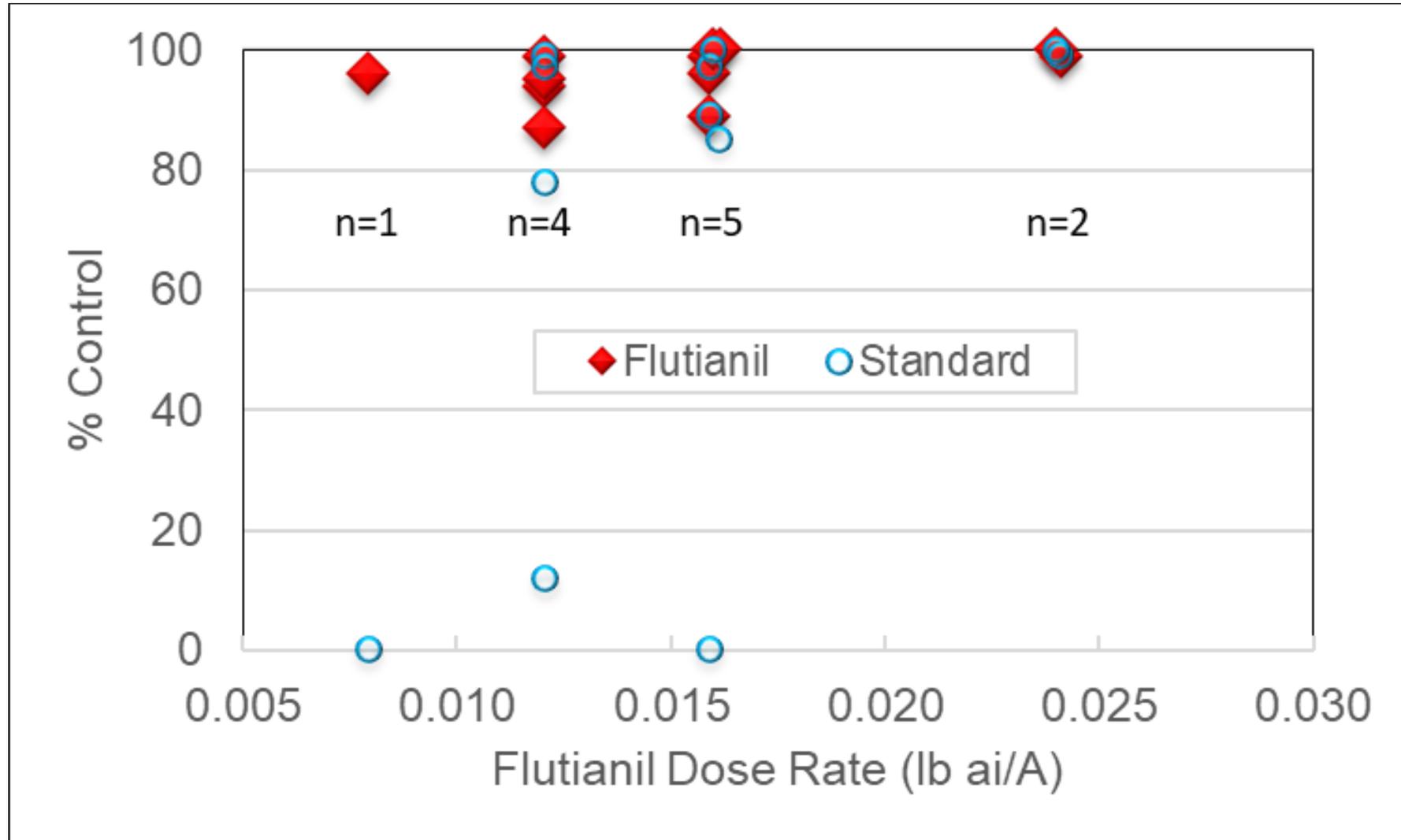
- Pepper (GH) – 2022 submission
  - ✓ Joint with IR-4, PMC leading
- Cucumber (GH part of GMUS) -2022 submission
  - ✓ Joint with IR-4; IR-4 leading, PMC doing efficacy and some residue trials
- Hops – 2022 or 2023 submission to PMRA and JMPR
  - ✓ Joint with IR-4, PMC leading
- Ornamental Crops Safety and Efficacy – 2022 submission (greenhouse)
  - ✓ PMC project with crop safety also being done by IR-4
- Apple, Peach and Field Strawberry – 2022 submission
  - ✓ URMULE submitted soon by BC with existing IR-4 data
- Tomato (GH) – 2023 submission (waiting for efficacy data)
  - ✓ Joint with IR-4; IR-4 leading, PMC doing efficacy
- Strawberry (GH) – ongoing at PMC
  - ✓ Residue and efficacy being done by PMC

■ PMC on-going studies to be submitted when complete. Target 2022 except for GH strawberries, tomato and possibly hops.

■ All crops eventually planned for registration in Canada and the USA.



# Field Performance on Grape (US)



# *Erysiphe necator*

Flutianil

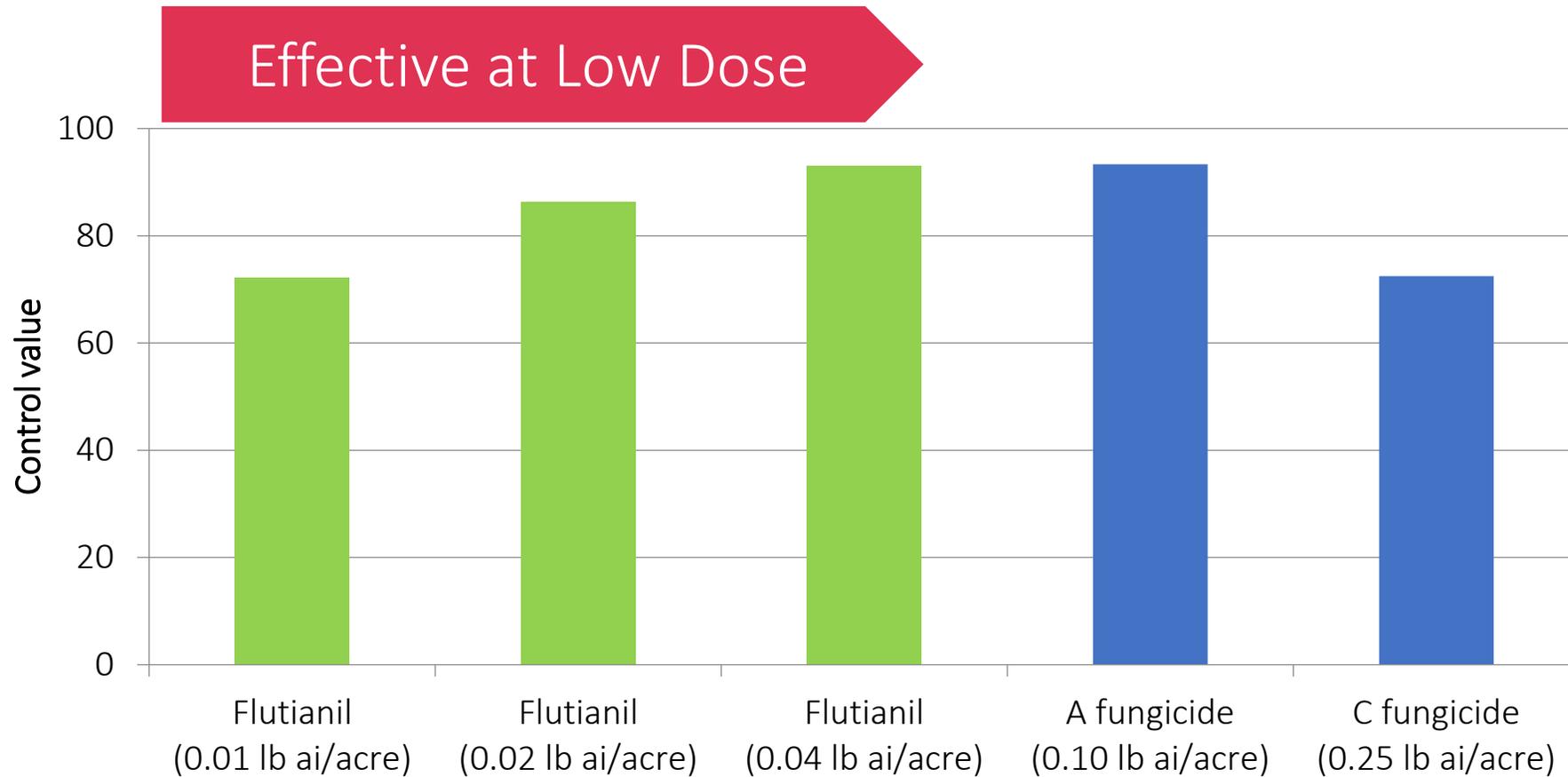
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- Location: Spain
- Application: June 6, 19, July 1, 15, 30, 2008



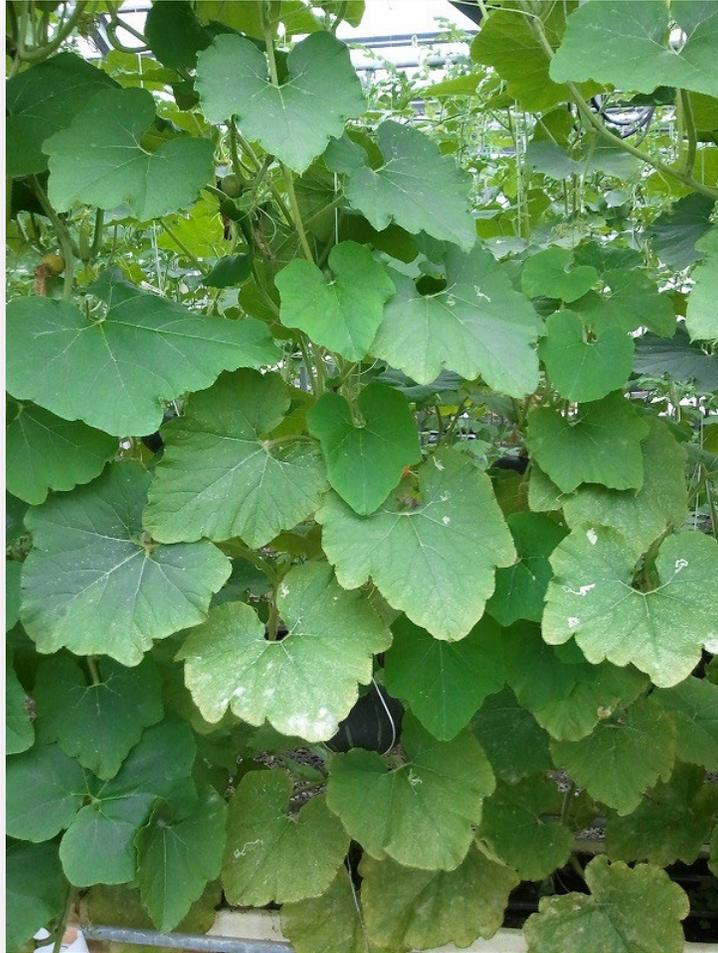
# *Podosphaera xanthii* on Leaves of Yellow Squash



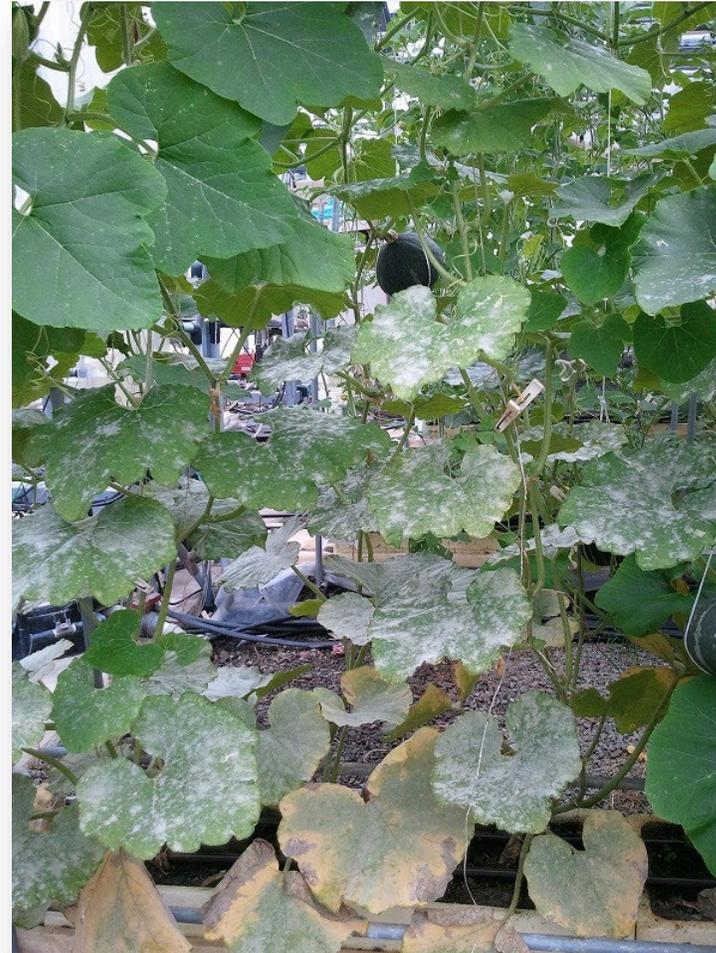
- Location: Raleigh, NC
- Five applications targeted at 7 days intervals
- Assessment was determined at 7 days after the last application
- Application: 1 - 7/27/2011, 2 - 8/3/2011, 3 - 8/10/2011, 4 - 8/17/2011, 5 - 8/24/2011

# *Sphaerotheca fuliginea* on Squash

0.03 lb ai/acre Flutianil

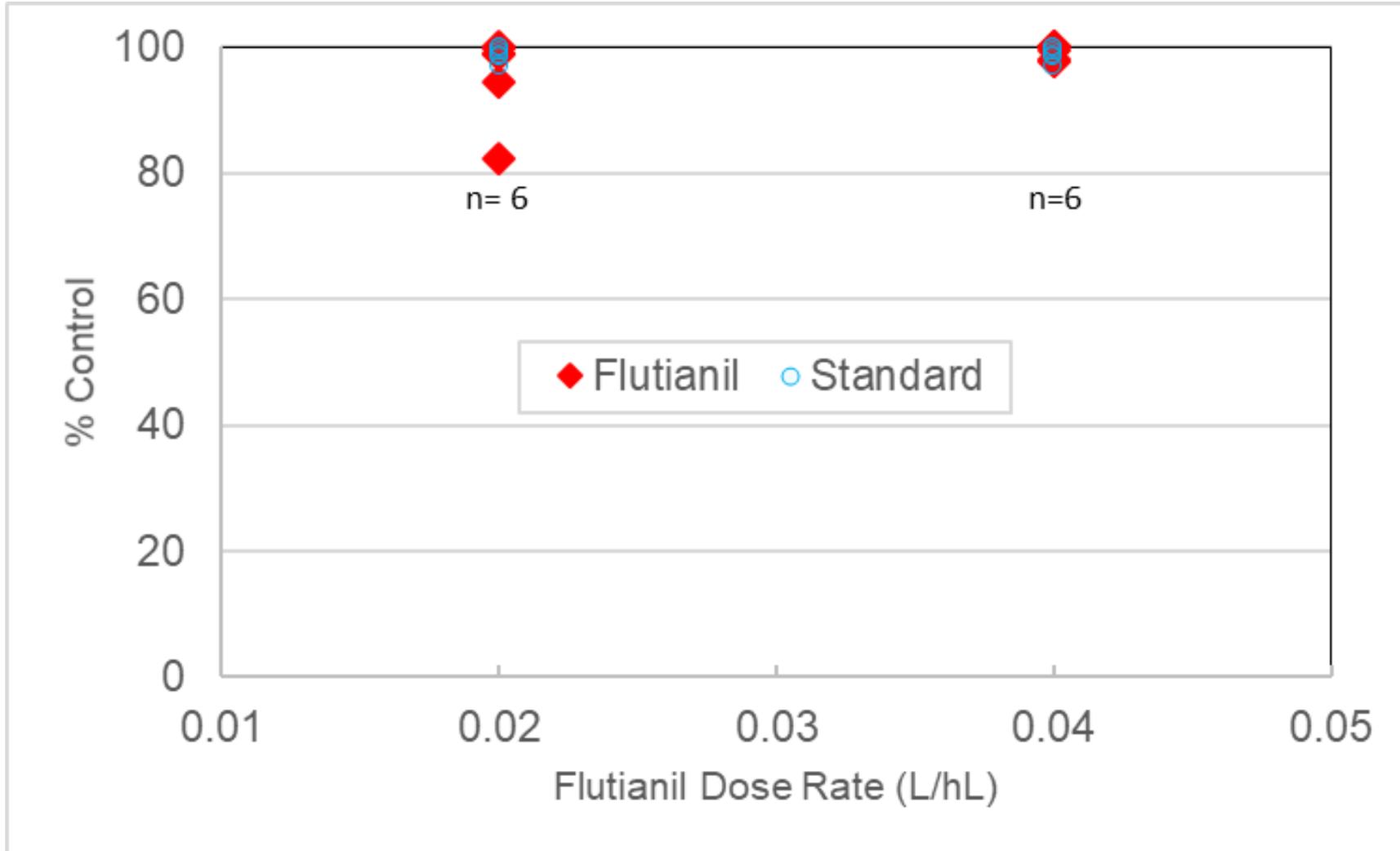


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- Location: Tokushima, Japan, OAT AGRIO
- One application targeted, Assessment was determined at 25 days after application
- Application: 1 - 6/18/2012

# Field Performance on Non-woody Ornamentals (EU)



# Thank you



OAT Agrio Co., Ltd.

— Tokyo, Japan —

