FLUTIANIL
Fungicide
Product name: GATTEN®
Flutianil, Characteristics

- New chemical group: cyano-methylene thiazolidine
- Effective in controlling powdery mildew
- **Novel Mode of Action against powdery mildew** (FRAC Code U13)
- No Cross-Resistance with other chemical classes
Regulatory Information

**US**
- Reduced risk status granted for all of the proposed crops.
- Anticipated approval: 2017
- Proposed crops: Apple, Cantaloupe, Cherry, Cucumber, Grape, Squash, and Strawberry

**Japan**
- Registered on Eggplant, Cucumber, Pumpkin and Squash, Watermelon, Melons, Strawberry, and Flowers and Ornamental plants

**Korea**
- Registered on Green & Red pepper (Fresh), Strawberry, Watermelon, Cucumber, Korean melon, and Sweet pepper

**EU**
- Under evaluation
- Anticipated registration in 2017
- Proposed crops: Grapes and Flowers and Ornamental plants
**US Label (proposed)**

- **Type:** Fungicide
- **Product Name:** GATTEN®
- **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 in US
- **Application:** 4-5 times per season, 7 day interval
- **PHI:** 0-14 days
- **Proposed crops:** Apple, Cantaloupe, Cherry, Cucumber, Grape, Squash, and Strawberry
  - **Note:** All granted reduced risk status
The 1.2-leaf stages of cucumber plants that were inoculated with *Podosphaera xanthii* 7 d before a flutianil application were observed in a low-temperature cryofixation electron microscope.

The 1.2-leaf stages of barley that were inoculated with *Blumeria grainis* f.sp. *hordei* 7 days before a flutainil application and stained with lactophenol trypan blue, at 3 d after fungicide application and observed under a microscope. Bars=50 µm.
The 1.2-leaf stages of barley that were inoculated with *B. grainis* f.sp. *hordei* 7 days before a flutainil application and stained with DAPI or rhodamine phalloidin, at 3 d after fungicide application and observed under a microscope.
**Erysiphe necator** on Chardonnay Grape

**Effective at Low Dose**

- Location: Italy
- Four applications, targeted for every 10 days until color change
- Assessment was determined at 11 (leaves) and 10 (bunches) days after the last application

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- **Flutianil** (0.01 lb ai/acre)
- **Flutianil** (0.02 lb ai/acre)
- **Flutianil** (0.04 lb ai/acre)
- **A fungicide** (0.06 lb ai/acre)
- **B fungicide** (0.11 lb ai/acre)
Erysiphe necator on Tempranillo Grape

Effective at Low Dose

- Location: Spain
- Four applications made every 7-10 days. Applications were started late in the season when bunches were already formed.
- Assessment was determined at 12 (leaves) and 8 (bunches) days after the last application
**Podosphaera xanthii** on Leaves of Yellow Squash

**Effective at Low Dose**

- Location: Raleigh, NC
- Five applications targeted at 7 days intervals
- Assessment was determined at 7 days after the last application

![Graph showing effectiveness of various fungicides at different doses](image-url)
Tomato GH Efficacy in Canada

- Study done this year
- Dr. Janice Elmhirst - Canada
- Formulation: 5% EC
- Use rate: 0.01 and 0.02 lb ai/acre (new targeted label use rate)
- Application: 4 times at a 7 day interval

Results:

- at 0.01 or 0.02 lb a.i./acre flutianil controlled powdery mildew of greenhouse tomato very well in the trial this year.

- Under moderate disease pressure, GATTEN 5% (flutianil) reduced leaf area diseased by 70-90% compared to the check and was similar to NOVA, up to 21 days after the last application.

- There was no difference between the 0.01 or 0.02 lb a.i. rates. No phytotoxicity on foliage, flowers or fruit.

**NOTE!** – Flutianil has been granted reduced risk status and is novel mode of action for resistance management (FRAC U-13)
Sphaerotheca fuliginea on Squash

0.03 lb ai/acre Flutianil

untreated

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

OAT Agrio Co., Ltd.
—Tokyo, Japan—

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