TECHNICAL INFORMATION BULLETIN—PEANUTS

OVERVIEW

Excalia™ Fungicide is a 2.84 SC foliar formulation of the active ingredient INDIFLIN® (inpyrfluxam). *Excalia* is intended for use on peanuts for white mold (Southern stem rot, *Sclerotium rolfsii*), Rhizoctonia limb and pod rot, and Sclerotinia blight. *Excalia* is powerful against peanut soil-borne diseases because it works quickly to form a long-lasting zone of protection around the peanut crown.

EXCALIA TECHNICAL FEATURES—PEANUTS

- Highly systemic action for fast movement into the limb/stem tissue
- Strong potency against *Sclerotium rolfsii*, the pathogen that causes white mold (Southern stem rot)
- Superior staying power for longer-lasting residual control
- Excellent fit in an Integrated Pest Management (IPM) program or Peanut Rx program

MODE OF ACTION

INDIFLIN, the active ingredient in *Excalia*, acts as a mitochondrial respiration inhibitor and disrupts the energy cycle in fungi by targeting succinate dehydrogenase (complex II). It interferes with spore germination, mycelial growth and spore production. As a foliar application, *INDIFLIN* has good rainfastness and exhibits translaminar activity, meaning that treatment of the upper (adaxial) surface of a leaf provides protection of the lower (abaxial) surface and vice versa. *INDIFLIN* is not phloem-mobile and therefore does not move out of a treated leaf to those above and below.

INDIFLIN belongs to the succinate dehydrogenase inhibitor (SDHI) class (Group 7) of fungicides as classified by the Fungicide Resistance Action Committee (FRAC).

PROPOSED TARGET DISEASES AND USE RATES FOR *EXCALIA*—PEANUTS

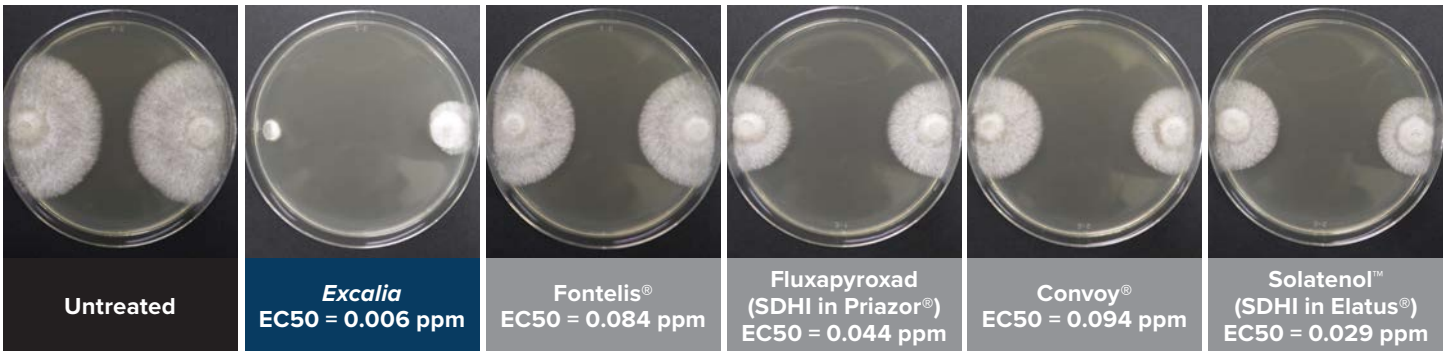
Excalia is anticipated to be labeled for use as shown in the table below.

Crop	Target Diseases	*Excalia* Use Rate	
		fl oz/A	lb AI/A
Peanuts	Southern Blight, Southern Stem Rot, White Mold (*Sclerotium rolfsii*) Rhizoctonia Limb & Pod Rot (*Rhizoctonia solani*) Sclerotinia Blight (*S. minor, S. sclerotiorum*) Early Leaf Spot (suppression) (*Cercospora arachidicola*) Late Leaf Spot (suppression) (*Cercosporidium personatum*)	2–4	0.044–0.089

Make up to 4 applications of *Excalia*, do not exceed 8 fl oz/A per year.

EXCALIA INHERENT ACTIVITY AGAINST *SCLEROTIUM ROLFSII* VS. OTHER SDHI FUNGICIDES

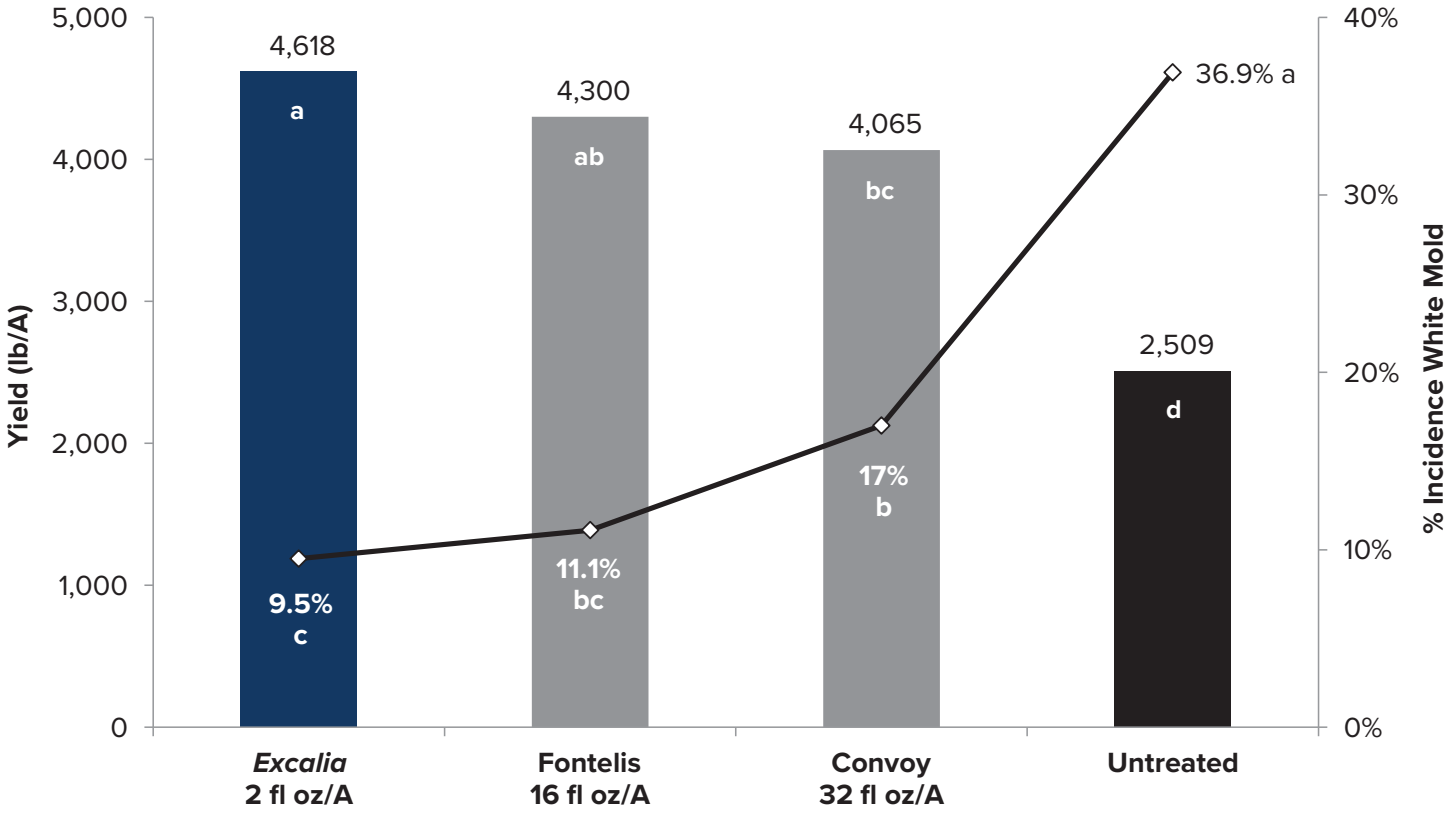
Excalia is highly active against *Sclerotium rolfsii*. Laboratory tests showed that *Excalia* inhibits the growth of the white mold pathogen at doses as low as 0.006 ppm (6 parts per billion). No other SDHI fungicide in the test provided the same level of inhibition at doses as low as *Excalia*. EC50 is the effective concentration in parts per million (ppm) needed to inhibit *S. rolfsii* hyphal growth by 50%. *Excalia* was more effective than other SDHI fungicides in inhibiting growth of *Sclerotium rolfsii* in laboratory testing.



EXCALIA EFFICACY AGAINST WHITE MOLD (SOUTHERN STEM ROT)

Excalia gives excellent control of white mold and delivers top yields when used in 2-, 3- and 4-block spray programs. For control of early and late leaf spot, a protectant such as chlorothalonil or other fungicide recommended for these diseases should be tank-mixed with *Excalia*.

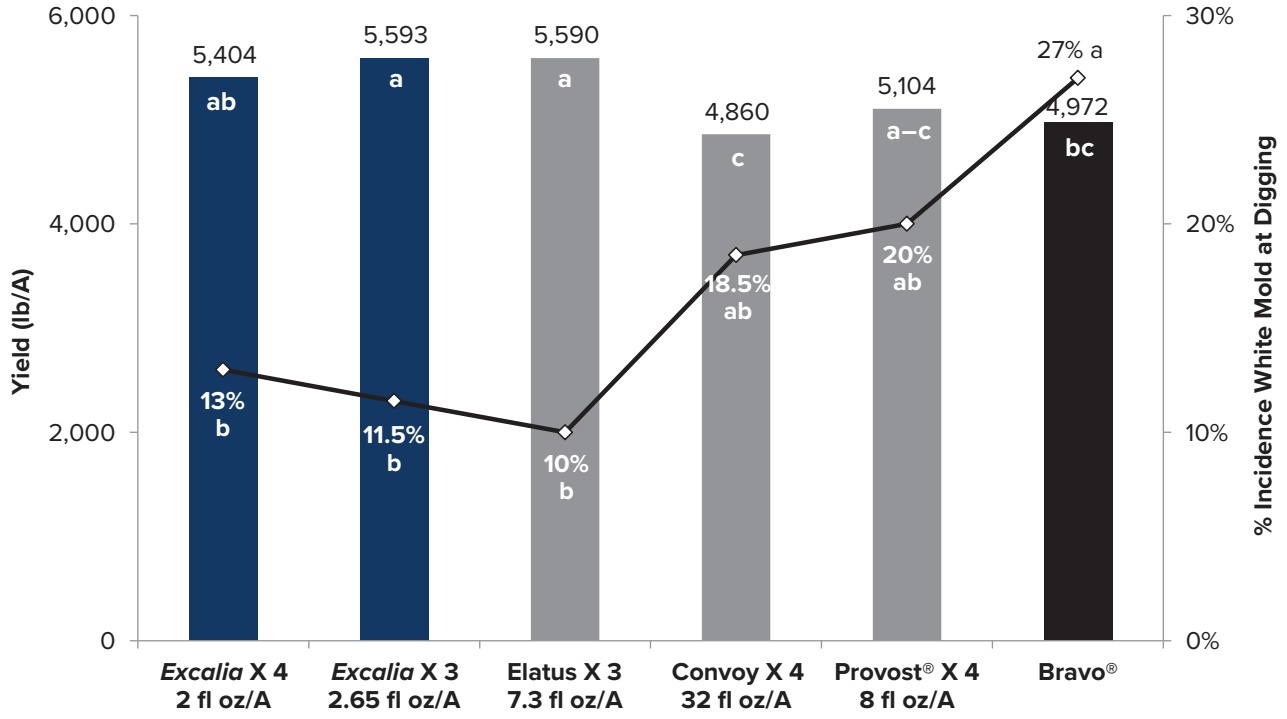
Excalia Delivered Excellent White Mold Control and Peanut Yields, Fifteen 4-Block Spray Program Trials Conducted Over Three Years



4-Block White Mold Spray Program: Bravo applied 7 times, 14-day interval, white mold fungicides applied at sprays 3–6. Means followed by the same letters are not statistically different (P<=0.10). Source: Valent

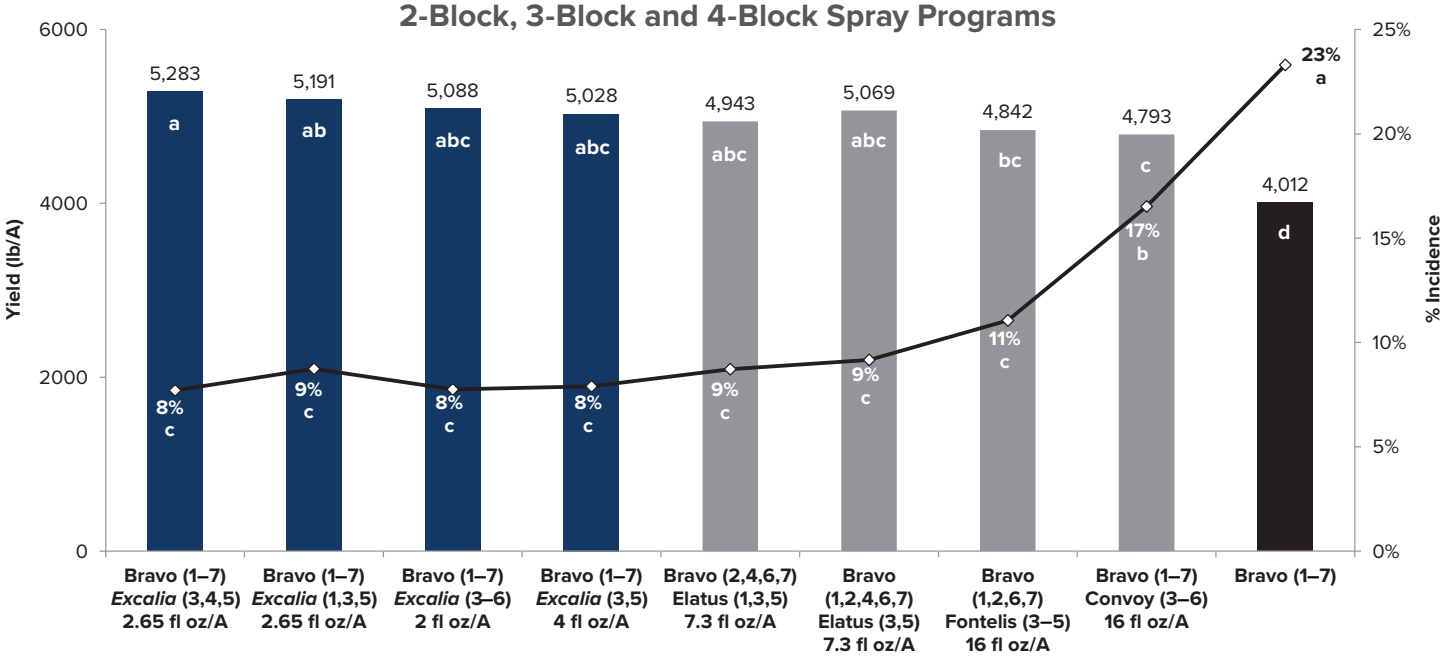
EXCALIA EFFICACY AGAINST WHITE MOLD (SOUTHERN STEM ROT)

Excalia Delivered Excellent White Mold Control and Peanut Yields, 3-Block and 4-Block Spray Programs



4-Block Program: Bravo applied 7 times, 14-day interval, white mold fungicides applied at sprays 3–6.
3-Block program: Bravo applied 7 times, 14-day interval; white mold fungicides applied at sprays 3–5.
Means followed by the same letters are not statistically different (P<=0.10). Source: Valent

Excalia Delivered Excellent White Mold Control and Peanut Yields, 2-Block, 3-Block and 4-Block Spray Programs



Bravo applied at 24 fl oz/A. Applications made at 14-day intervals with Spray 1 at 30 Days After Planting (DAP); Spray 2—45 DAP; Spray 3—60 DAP; Spray 4—75 DAP; Spray 5—105 DAP; Spray 6—120 DAP; Spray 7—135 DAP.
Means followed by the same letters are not statistically different (P<=0.10). Source: Valent

***Excalia* 2 fl oz/A**
4-Block White Mold Spray Program

Untreated

RESISTANCE MANAGEMENT GUIDELINES

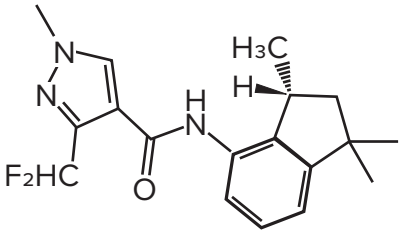
For resistance management, do not tank mix with other FRAC 7 fungicides.

IDENTITY, PHYSICAL AND CHEMICAL PROPERTIES

The information contained herein is, to our knowledge, true and accurate as of the published date of this bulletin. Valent U.S.A. LLC continues to gather additional information as to the efficacy, toxicology, protective procedures and equipment, etc., and the forgoing is inherently interim and incomplete.

Common name: inpyrfluxam (ISO)
Chemical name: 3-(difluoromethyl)-*N*-[(*R*)-2,3-dihydro-1,1,3-trimethyl-1*H*-inden-4-yl]-1-methyl-1*H*-pyrazole-4-carboxamide
Group name: Succinate dehydrogenase inhibitor (SDHI)
Chemical group: pyrazole-4-carboxamide
FRAC Code: 7

Chemical structure:



TOXICITY

For Formulated Product:
Acute oral LD_{50} (rat): 550 mg/kg (EPA Tox Category III)
Acute dermal LD_{50} (rat): >5,000 mg/kg (Tox Category IV)
Acute inhalation LC_{50} (rat): >2.10 mg/L (4 hr) (Tox Cat IV)
Eye irritation: Non-irritating (Tox Category IV)
Skin irritation: Non-irritating (Tox Category IV)
Skin sensitization: Non-sensitizer

THIS IS NOT A LABEL. CONTACT A VALENT REPRESENTATIVE IF YOU NEED ADDITIONAL INFORMATION.