Improving management of white mold in dry beans:

Fungicide efficacy: Aproach, Miravis Neo, Priaxor

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Improving white mold management in dry beans:

Comparative fungicide efficacy – methods

Market class = pinto in most studies; kidney in some studies

Row spacing = 14 inches

Seeding rate = 90,000 viable seeds/ac in most studies; sometimes 80,000 viable seeds/ac

Fungicide spray volume = 15 gal/ac.

Fungicides applied with a hand-held boom pressurized by CO_2.

Fungicide spray droplet size: fine or medium in studies conducted from 2010-2021; fine, medium or coarse, calibrated relative to canopy characteristics, from 2022-2024.

Number of fungicide applications: two

Application timing, first fungicide application: early bloom and initial pin pod-pod

Interval between fungicide applications: 7 to 14 days later, depending on study

Number of experimental replicates = 5 or 6 replicates (most studies)

White mold assessment: Assessed at/ near dry bean maturity by evaluating every plant individually in for percent of the plant impacted by white mold in a minimum half of the plot.

Harvest: To ensure that variability in dry bean standability did not bias yields, plants were clipped at base concurrent with disease assessments, wind-rowed to dry, and manually lifted into the combine.

Supplemental irrigation: Supplemental overhead irrigation was applied as needed to establish the white mold disease pressure needed to evaluate fungicide performance.

Fungicide efficacy summaries:

Testing was conducted with two sequential applications of the same fungicide with the goal of rigorously assessing comparative efficacy.

These comparative efficacy results are provided to help facilitate informed decisions for selecting products for application once or twice in-season, either alone or in rotation with another fungicide.

Comparative fungicide efficacy: white mold in dry edible beans

Two sequential applications of the same fungicide,
initial pin-pod + 11, 13 or 14 days later

Endura 8 oz/ac vs. **Aproach** 12 fl oz/ac

Combined analysis across seven studies

Carrington and Langdon, ND (2010, 2012, 2013)

	WHITE MOLD Severity index % of canopy	**DRY BEAN YIELD** lbs/ac
Non-treated control	**48** b	**2496** b
Endura 8 oz/ac	**26** a	**3117** a
Aproach 12 fl oz/ac	**41** b	**2643** b
CV:	22.1	5.9

Within-column means followed by different letters are significantly different. ($P < 0.05$; Tukey procedure).

Comparative fungicide efficacy: white mold in dry edible beans

Two sequential applications of the same fungicide,
initial pin-pod + 13 or 14 days later

Endura 8 oz/ac vs. **Miravis Neo** 13.7 fl oz/ac

Combined analysis across five studies
Carrington, ND (2019, 2022, 2023, 2024)

	WHITE MOLD Severity index % of canopy	**DRY BEAN YIELD** lbs/ac
Non-treated control	**70** b	**1776** b
Endura 8.0 oz/ac	**58** a	**2466** a
Miravis Neo 13.7 fl oz/ac	**69** b	**1901** b
CV:	10.3	7.4

Within-column means followed by different letters are significantly different. ($P < 0.05$; Tukey procedure).

Comparative fungicide efficacy: white mold in dry edible beans

Two sequential applications of the same fungicide,
initial pin-pod + 7-14 days later

Miravis Neo 13.7 fl oz vs. **ProPulse** 10.3 fl oz

Combined analysis across four studies
Carrington, ND (2022, 2024)

	WHITE MOLD Severity index % of canopy	**DRY BEAN YIELD** lbs/ac
Non-treated control	**70** b	**1776** b
Endura 8.0 oz/ac	**58** a	**2466** a
ProPulse 10.3 fl oz/ac	**57** a	**2402** a
Miravis Neo 13.7 fl oz/ac	**69** b	**1901** b
CV:	10.4	9.3

Within-column means followed by different letters are significantly different. ($P < 0.05$; Tukey procedure).

Comparative fungicide efficacy: white mold in dry edible beans

Two fungicide applications,
initial pin-pod + 7, 12 or 13 days later

Endura 8 oz applied twice vs.
Endura 8 oz followed by **Priaxor** 4 fl oz

Combined analysis across five studies
Carrington, ND (2012, 2014, 2019, 2020, 2024)

	WHITE MOLD Severity index % of canopy	**DRY BEAN YIELD** lbs/ac
Non-treated control	**51** b	**2227** a
Endura 8.0 oz/ac	**38** a	**2584** a
Endura 8.0 oz/ac / **Priaxor** 4 fl oz/ac	**43** ab	**2389** a
CV:	10.8	8.3

Within-column means followed by different letters are significantly different. ($P < 0.05$; Tukey procedure).

Improving white mold management in dry beans:

Comparative fungicide efficacy – Topsin/generic

Conclusions from comparative efficacy testing

Applied as either as two fungicide applications (initial pin-pod + 7-14 days) or in rotation with another fungicide,

Aproach (12 fl oz/ac),

Miravis Neo (13.7 fl oz/ac), and

Priaxor (4 fl oz/ac)

were less effective against white mold in dry beans than the competitive standards to which they were compared (Endura 8 oz/ac and/or ProPulse 10.3 fl oz/ac).




People

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