Field Evaluation of New Versus Traditional Fungicides for Management of White Mold in Dry Beans

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Identifying which fungicides to use for white mold management on dry edible beans is getting more difficult as additional products are registered. The relative performance of the fungicides with current or anticipated registration is poorly understood; side-by-side comparisons have not been made.

All fungicides with current or anticipated registration for white mold control on dry beans were tested in Carrington and Langdon in 2012 using 'Maverick' pinto beans planted to 30-inch rows. Planting date was May 17 in Langdon and May 24 in Carrington. A subset of these fungicides was also tested in a second trial planted June 15 in Carrington. In this trial, 'Othello' pintos were seeded to 14-inch rows.

In the trials planted in May, the beans entered bloom in early to mid-July when temperatures were not favorable for white mold. Much of the yield potential was already determined by the time temperatures moderated in August and white mold became severe; consequently, yield responses to fungicides were low. Yield responses to fungicides were much higher in the trial planted in mid-June; in this trial, the beans were in full flower when white mold pressure was high.

Under conditions of high disease pressure (narrow row spacing and disease onset during full bloom), Endura (8 oz/A) performed well. Under conditions of moderate disease pressure (wide row spacing and disease onset during pod-fill), ProPulse (8.6 or 10.3 fl oz/A) and Endura (8 oz/A) performed well. In both environments, Topsin (30 and 40 fl oz/ac) also performed fairly well.

High environmental variability otherwise made it difficult to assess fungicide efficacy in these trials. To address this problem, the size of future trials will be reduced by testing application rates and side-by-side comparisons separately.