

BEAN (DRY) (*Phaseolus vulgaris* 'UI 465')
 Seed decay and damping-off; *Pythium* spp.
 Fusarium root rot; *Fusarium solani* f. sp. *phaseoli*
 Rhizoctonia root rot; *Rhizoctonia solani*

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Seed treatments for improved stand and yield in dry beans in Twin Falls County, ID, 2004.

The experiment was established at the Kimberly Research and Extension Center on 3 Jun. The field had been in winter wheat (*Triticum aestivum*) in 2003 and was furrow irrigated. Soil type was Portneuf silt loam (20 -74-6% sand-silt-clay and pH 7.9). Seed treatments were applied as a slurry (12 fl oz/100 lb seed) on 14 May at the rates indicated in the table below. Experimental units consisted of 4 rows spaced 22 in. apart x 25 ft long, and were arranged in a randomized complete block design with 4 replicates. At planting the minimum and maximum soil temperatures at 2 in. depth were 59 and 84°F, respectively. Fertility, weed and insect control, and irrigation management were consistent with common commercial practices. Stand counts were recorded on 11 Jun and 16 Jun at late -emergence and primary leaf stages, respectively. Roots from 10 plants were collected from border rows in each plot on 16 Jul when all plants had at least one open flower. The plants were evaluated for root rot on a scale of 0-4 (0 = none; 4 = severe root rot). Beans were cut on 24 Aug and dried on the soil surface until they were threshed on 1 Sep with a belt thresher. Beans were screened through a 9/64 in. slotted screen to eliminate debris and culls and weighed to determine yield. Data were analyzed using the general linear model procedure (Proc GLM) in SAS. Fisher's Protected LSD was used for mean comparisons.

Yields in the field were below average and not significantly different. Dynasty delayed emergence in the first stand count since treatments with this product had fewer plants than the untreated check. In the second stand count 5 days later there were no differences in stand between treatments. All treatments with mefanoxam and fludioxonil (Apron XL plus Maxim or ApronMAXX) had reduced root disease severity.

Treatment and rate/100 lb seed	No. of plants/10 ft		Root disease severity*	Yield (lb/A)
	11 Jun	16 Jun		
Untreated check	32 ab	43	61 a	2023
Apron XL 3LS 0.33 fl oz + Maxim 4FS 0.08 fl oz	30 bc	45	52 b	1882
Apron XL 3LS 0.33 fl oz + Maxim 4FS 0.08 fl oz + Cruiser 5FS 1.28 fl oz ...	37 ab	48	43 bc	1909
Apron XL 3LS 0.33 fl oz + Maxim 4FS 0.08 fl oz + Dynasty 0.83FS 0.38 fl oz	23 cd	44	39 cd	2112
Apron MAXX 240EC 0.4 fl oz + Dynasty 0.83FS 0.38 fl oz	24 cd	46	36 cd	1958
Apron XL 3LS 0.33 fl oz + Maxim 4FS 0.08 fl oz + Dynasty 0.83FS 0.38 fl oz + Cruiser 5FS 1.28 fl oz	22 d	43	34 d	1885
Captan 400FS 1.76 fl oz + Allegiance FL 0.1 fl oz + Poncho 70WP 1.37 oz....	39 a	48	62 a	1856
<i>P</i> > <i>F</i> **	0.0003	0.6149	0.0001	0.4154
LSD (<i>P</i> ≤ 0.05)	7	NS	9	NS

* Disease severity was determined using the following formula: [((A)0+(B)1+(C)2+(D)3+(E)4)/40]100, where A-E are plants in categories 0-4, respectively.
 ** *P* > *F* was the probability associated with the *F* value. LSD = Fisher's protected least significant difference value. NS = not significantly different. Means followed by the same letter did not differ significantly based on Fisher's protected least significant difference value with *P* ≤ 0.05).