

Field Pea Response to Avail, 2006 and 2010

Paul Hendrickson

Experiments were conducted at the Carrington Research Extension Center to evaluate field pea response to Avail. To evaluate the effectiveness of Avail, 11-52-0 and 11-52-0 treated with Avail were applied with the seed at a rate of 22.5 lbs phosphate /acre.

2006: The study was established using conventional tillage practices. A fall soil test indicated 4 ppm (Olsen) phosphate. Inoculated 'DS Admiral' field pea was sown April 25 in 7-inch rows at 300,000 pure live seeds/acre. An additional treatment was also included to evaluate the inoculant QuickRoots. The trial was harvested July 19.

Quickroots and 11-52-0 increased seed yield compared to the untreated check (Table 3). The 11-52-0 + Avail treatment did not improve seed yield compared to 11-52-0.

Table 1. Field pea response to Avail, 2006.

Treatment	1000 KWT gram	Test Weight lb/bu	Seed Protein %	Seed Yield bu/acre
Untreated Check	213	64.9	21.6	9.3
11-52-0	213	65.3	19.8	16.8
11-52-0 + Avail	206	64.9	20.1	21.1
QuickRoots	200	65.2	19.7	19.3
LSD (P=0.05)	NS	NS	1.0	6.0

Field Pea: The study was established using conventional tillage practices. A fall soil test indicated 7 ppm (Olsen) phosphate. Inoculated 'DS Admiral' field pea was sown April 27 in 7-inch rows at 300,000 pure live seeds/acre. The trial was harvested August 6.

No differences were detected among the parameters measured (Table 2).

Table 2. Field pea response to Avail, 2010 .

Treatment	Days to Bloom	Bloom Duration	Days to PM	Plant Height inch	Plant Lodge 0-9	1000 KWT gram	Seed Protein %	Test Weight lb/bu	Seed Yield bu/ac
Untreated Check	57.0	19.0	87.0	30.7	2.0	279	21.7	63.9	56.5
11-52-0	57.0	19.0	87.0	30.7	2.0	279	21.6	63.8	61.6
11-52-0 + Avail	57.0	19.0	87.0	30.7	2.0	284	21.5	63.8	61.2
LSD (P=.05)	NS	NS	NS	NS	NS	NS	NS	NS	NS

A combined analysis was conducted on yield for the untreated check, 11-52-0, and 11-52-0 + Avail. There was no site year by treatment interaction. When averaged over site year, seed yield for 11-52-0 (39 bu/ac) was similar to 11-52-0 + Avail (41 bu/ac) and greater than the untreated check (33 bu/ac), LSD (P=.05) = 5 bu/ac.