

PGRO

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Effects of Soil-Set on field Spring Beans

**Commissioned by Acorn Seeds Ltd
Denver Norfolk**

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Summary: In an observation trial in Diana spring field beans, plant growth and seed yields were measured following an autumn application of Soil-Set to the wheat stubble prior to planting. A comparison was made between two areas which were sited in a commercial crop. Plant height was not affected. Root length was longer on the untreated area, but pod numbers, total seeds per plant and seed weight were significantly increased where Soil-Set had been applied.

Processors & Growers Research Organisation

At Whattoff Lodge, Woodhouse Eaves, Leicestershire, approximately 1 ha of a field of wheat stubble, previously dressed with a low application rate of wood chips was sprayed with Soil-Set at a rate of 750 ml / ha on the 28th November 2006. The field was ploughed in the spring and Diana spring beans were planted on 30th March 2007.

Just prior to harvest, 50 plants were sampled across each area and plant length and root lengths were measured on each plant. All pods were removed and the number of beans and their dry weight (@ 85% dry matter) were recorded.

Data were analysed by Analysis of Variance (Genstat 5)

Results

The results of the assessments are shown below:

	Plant Length cm	Root Length cm	Pods / Plant	Seeds / Plant	Seeds/Pod	Wt. of Seed	Average seed weight
untreated	148.4	14.8	14.1	41.1	2.98	16.6	0.41
Soil-Set	149.2	12.9	16.4	54.8	3.35	22.6	0.43
LSD	5.4	1.47	2.08	8.0	0.22	3.31	0.05
	nsd	sig	sig	sig	sig	sig	nsd

There was no significant difference in plant length between the Soil- Set treatment and the untreated areas, although the length of roots as measured from the tip to the soil level was slightly shorter. The number of pods per plant was significantly higher on the Soil-Set treated area and also there was an increase in the number of seeds per pod. This resulted in an overall estimated yield increase of 36%.

This trial was a none replicated observation trial.

Dr. AJ Biddle
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