

FIELD EXPERIMENTS 1955

File D.7.
55/1

Peas
SUGAR BEAN Weed Control Experiments

Site: 24 Acres, Sprowston.

Soil Type: light/medium loam pH 7.8 P medium high
K very low

Major Indigenous Weed Species:
Knotgrass

Experiment: "Peas I"

To compare DNEP and DNIP in 3 different formulations at 3 rates on a clean crop of peas.

Treatments: All combinations of:

DNEP 2, 4 - dinitro 6-sec-butylphenol
DNIP 2, 4 - dinitro 6-isopropylphenol

acid formulation
ammonium salt
triethanolamine salt

Each at $\frac{1}{2}$, 1 and 2 lb per acre in 80 gallons water per acre.

Layout: 3 randomised blocks.

Treatment Plot Size: 8 rows (@ 20") x 6 yds
actually sprayed; 4 yds x 6 yds = $\frac{1}{200}$ th acre.

Harvest Plot Size: 6 rows x 5 yds = $\frac{1}{291}$ acre.

Previous Cropping and Manuring: 1951 Spring Wheat
1953 Winter Wheat
1952 Fodder Beet

Manuring of Experimental Crop: 3 cwt 10.10.15 early April.

Cultivation:

Drilling. Date: 19th April Rate: 18 stones per acre

Drill: Bean Seed: Thomas Laxton
Row-width: 20"

Date of Brairding: c 29th April.

Spraying

1. Date: 25th May. 2.30 - 6.30 p.m.
2. ~~SOLICORONOLIN~~ (Previous weather): 10 days cold, wet, very slow growth, then 2 days a little better with appreciable growth.
3. Weather Conditions During Spraying: Fine, sunny. Max. temp. 56°F. becoming cooler. Moderate to fresh N.E. breeze some drift. Humidity medium.
4. Method Adopted:
O.P.S. 35-40 lb psi. $3\frac{4}{5}$ pints per plot. No. 3 nozzles. Plots covered twice.
5. Order of Spraying: Acid, Ammonium, Amine.
Each DMBP, DMIP, 2 lb \rightarrow $\frac{1}{2}$ lb, I, II, III.
6. Chemicals: Supplied by A.R.C. Unit, Oxford.
Made up a.m. to 480 cc per treatment using wopaine when necessary. In the field 160 cc taken per plot and diluted in sprayer with 2.9 pints of water.
7. State of Weeds: Very few since tractor hoeing 2 days before. Some Knotgrass and Chickweed in rows only.
8. State of BEET: Peas: 3-5" high, mostly 4-5".

Condition after Spraying: Dry (first rain June 4th). Max temp. in following week: 60°F, on May 29th. No air frosts but several ground frosts.

Weed and BEET COUNTS:

Harvesting:

Date: July 28th, 29th plots pulled by hand and left in windrows down centre of plot. Windrows turned 3/8 and 2/9.

Method: September 2nd, 3rd put through N.I.A.B. 3'6" combine. Threshed out well. Loss only on plot 60 when excess fan speed blew most of plot over the back.

General Observations:

25th May 8 p.m. No obvious symptoms of damage.

2nd June Damage at $\frac{1}{2}$ lb very slight, at 1 lb slight and at 2 lb only moderate and only to the lower leaves. No difference discernible between DMBP, DMIP. Of the formulations, the Ammonium Salt could be picked out as most severe.

Weed kill not very complete but so few weeds that assessment very difficult.

6th June All treatments recovering rapidly.

Peas I24 Acres, Sproston 1956

Results: cwt dry peas per acre.

Chemical lb per acre	DNEP				DNEP			
	$\frac{1}{2}$	1	2	Mean	$\frac{1}{2}$	1	2	Mean
Acid	18.6	18.9	18.8	18.7	19.6	18.7	17.2	18.5
Ammonium	18.1	19.2	16.8	18.0	20.1	17.0	15.8	17.6
Amine	17.4	18.2	18.2	17.9	16.9	17.5	18.6	17.6

Means:

<u>Chemical</u>	<u>Formulations</u>	<u>Rates</u>
Controls	17.9	
		Acid 18.6
DNEP	18.2	$\frac{1}{2}$ lb 18.4
		Ammonium 17.8
DNEP	17.9	1 lb 18.2
		Amine 17.8
		2 lb 17.6

No differences significant at 5% level.