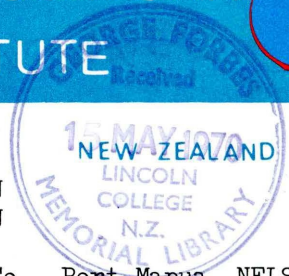


NEW ZEALAND AGRICULTURAL ENGINEERING INSTITUTE

Public TEST REPORT NO. T/36
LINCOLN COLLEGE

CANTERBURY

STILL AIR LABORATORY TEST ON THE MARK I TARTAN
SPEED SPREADER SPREADING 10% W/W FENITROTHION



MANUFACTURER & SUPPLIER OF MACHINE: Farm Chemicals Co., Port Mapua, NELSON.

MANUFACTURER OF INSECTICIDE: Farm Chemicals Co., Port Mapua, NELSON.



TEST PROCEDURE:

A full description of the test procedures and equipment is contained in Project Report P/5 of the New Zealand Agricultural Engineering Institute issued in July 1969.

BRIEF DESCRIPTION OF THE MACHINE AND MANUFACTURERS
RECOMMENDATIONS:

The Mark I Tartan Speed Spreader is a three point linkage mounted spinning disc distributor, powered by a 12 volt motor.

Mounting:

The spinner should be level and approximately 2 ft above the ground when mounted.

Dimensions:

Overall dimensions.. 41" x 21" x 20"
Weight complete with sieve, lid and 3 point linkage.. 123 lbs
Volume of Hopper.. 2.6 cubic feet

SPECIFICATIONS OF THE MATERIAL:

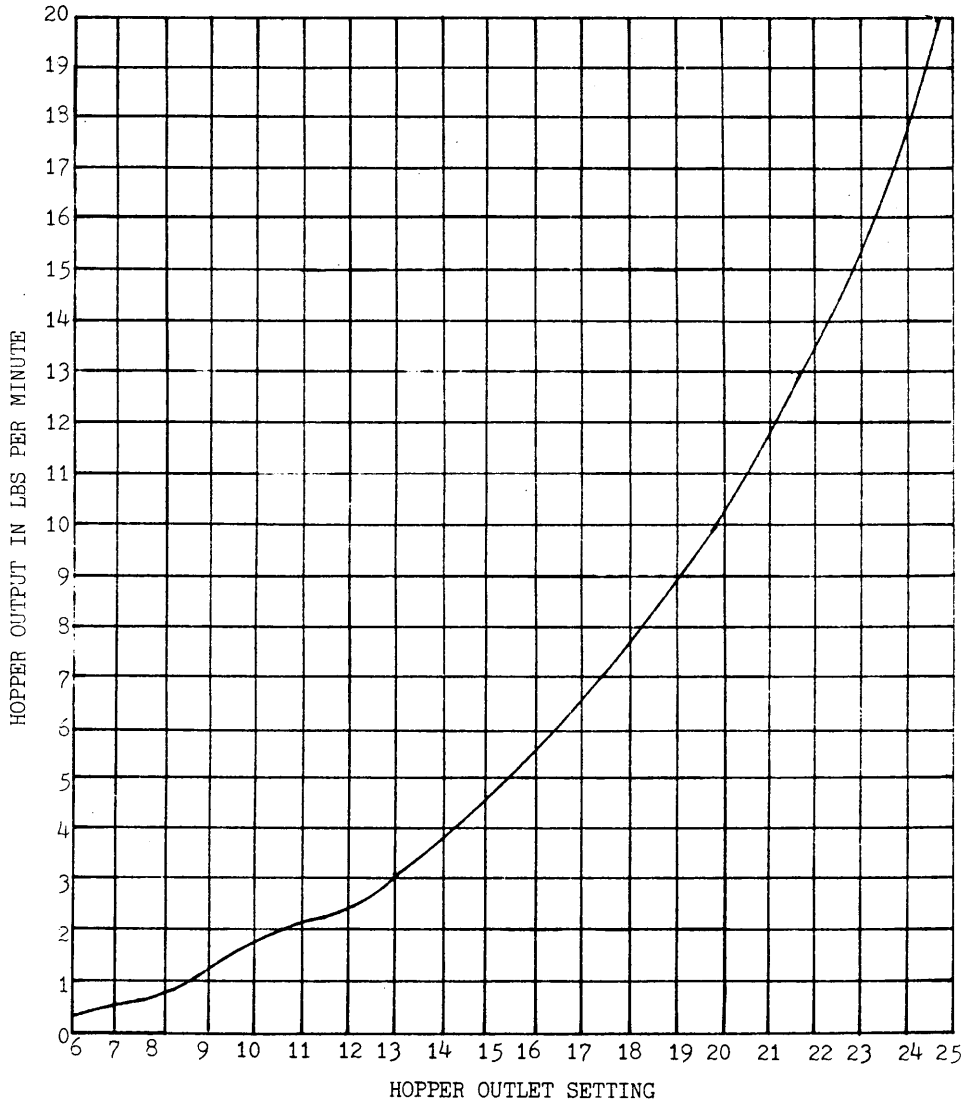
Name: 10% W/W Fenitrothion
Active Content: (Dimethyl 3-Methyl-4-Nitrophenol Phosphorothionate)
Inert Material: Calcite Chip
Bulk Density: 79 lbs 14. ozs per cubic foot
Sieve Analysis:

B.S. Sieve No.	% by weight
16	6.0
22	58.9
30	24.4
44	0.5
pan	0.2

EFFECT OF DEPTH OF MATERIAL IN HOPPER ON OUTPUT:

There was no significant alteration in hopper output due to the depth of material in the hopper.

HOPPER OUTPUT (Flow Rates)

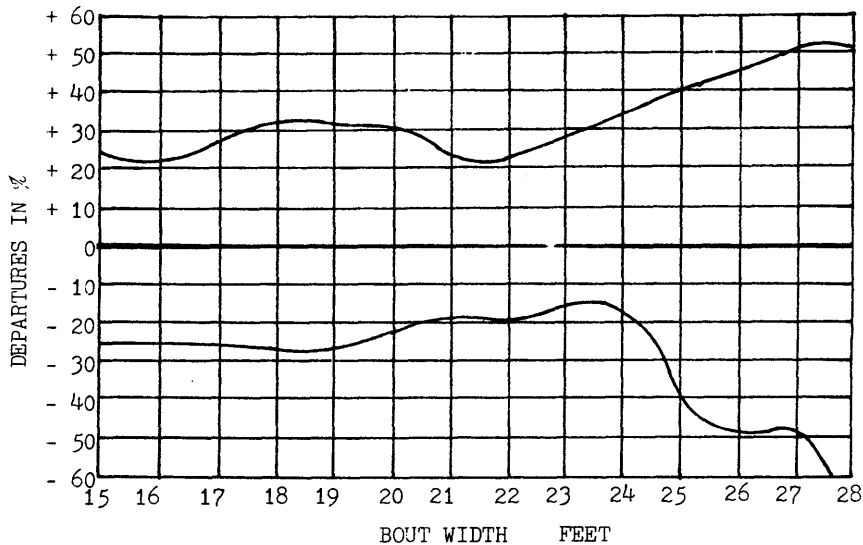


MAXIMUM DEPARTURES FROM MEAN APPLICATION
RATE AT VARIOUS BOUT WIDTHS

Mode of Travel: Round & Round

Above Mean Rate: - - - - -

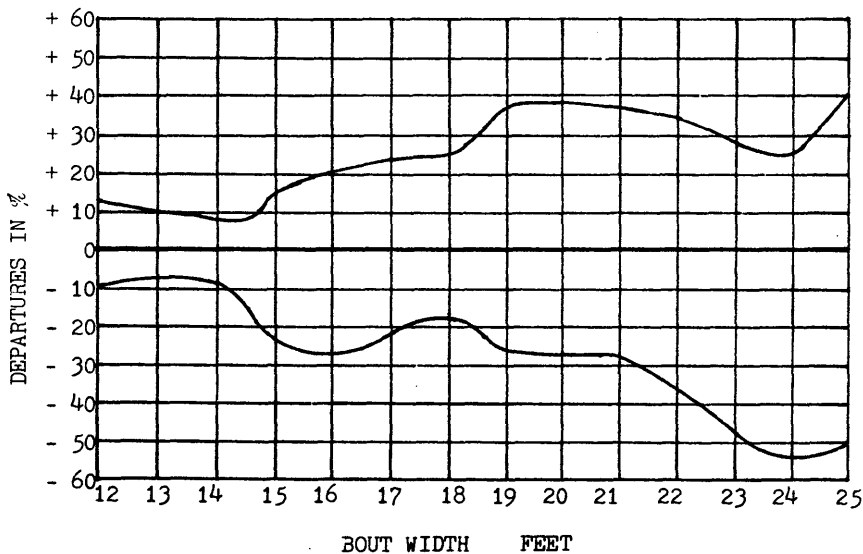
Below Mean Rate: _____



Mode of Travel: To & Fro

Above Mean Rate: - - - - -

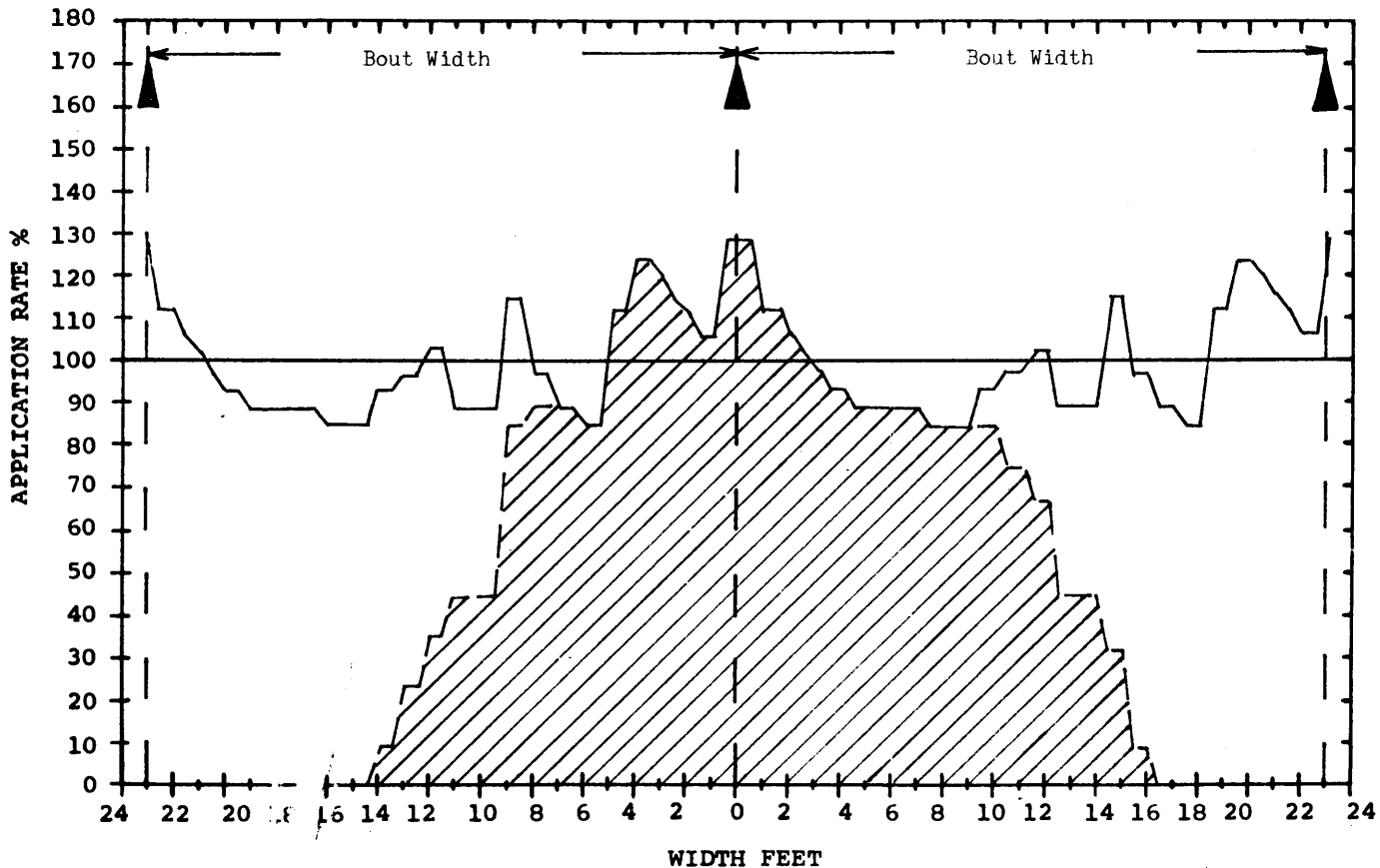
Below Mean Rate: _____



TRANSVERSE DISTRIBUTION PATTERN

Disc Setting: X = 4.0" (see Instruction Book)
Bout Width: 23 Feet
Hopper Outlet Setting: 11

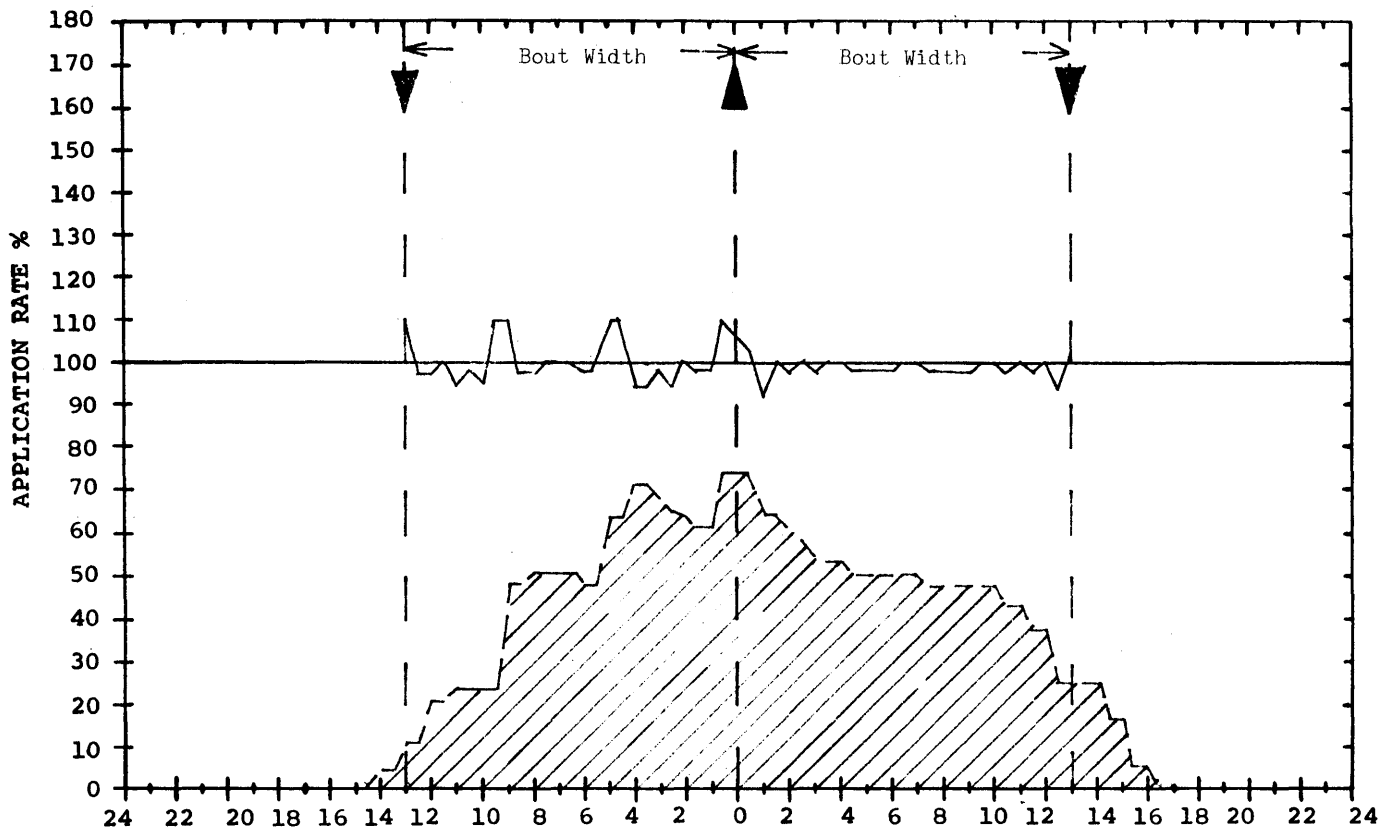
Mode of Travel: Round & Round
Speed of Travel: 4 3/4 m.p.h.
Application Rate: 10 lbs per acre



TRANSVERSE DISTRIBUTION PATTERN

Disc Setting: X = 40" (see Instruction Book)
 Bout Width: 13 Feet
 Hopper Outlet Setting: 11

Mode of Travel: "To & Fro"
 Speed of Travel: 8.3 m.p.h.
 Application Rate: 10 lbs per acre

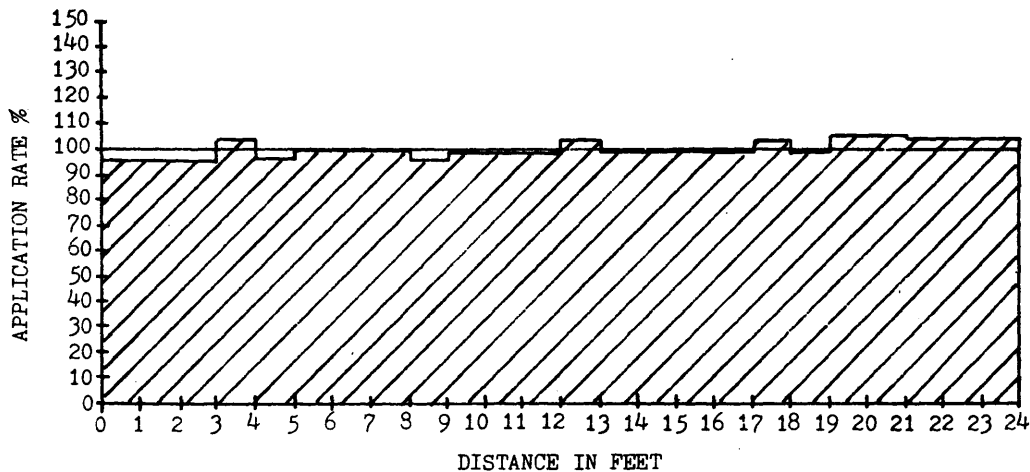


LONGITUDINAL DISTRIBUTION

Hopper Outlet Setting: 15

Disc Setting: As for Transverse Distribution "To and Fro" Travel

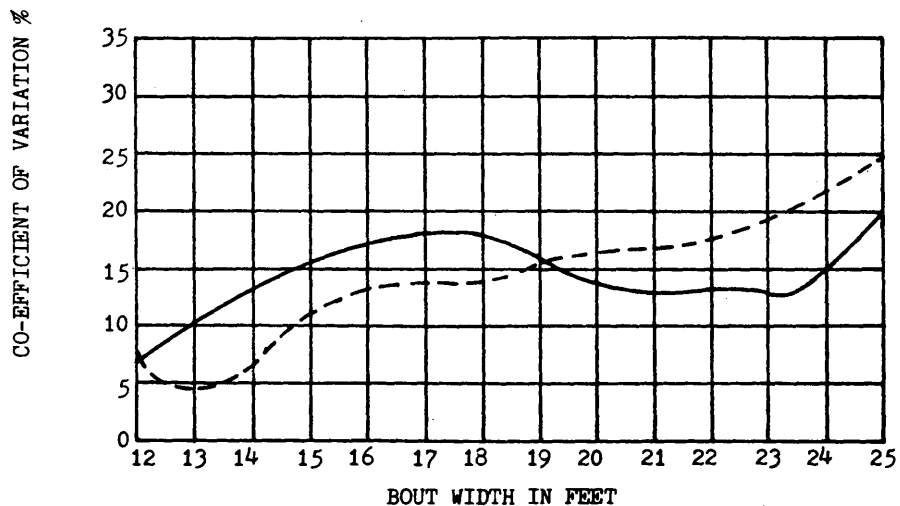
Speed of Travel: 1.64 m.p.h.



SENSITIVITY TO FLUCTUATIONS IN BOUT WIDTH

Mode of Travel: "To & Fro" -----

"Round & Round" _____



SIGNIFICANT PERFORMANCE CHARACTERISTICS:

The shape of the curve on the Sensitivity to Fluctuations in Bout Width graph of the Mode of Travel "Round & Round" indicates a Machine/Material spreading combination relatively unaffected by alterations in Bout Widths of between 20 and 24 feet.

MANUFACTURERS COMMENTS:

"This machine was produced from 1957 until 1969 when it was superseded by a new model, the Mark II."

Testing Officer

Date 2-3-1970

DIRECTOR