

NEW ZEALAND AGRICULTURAL ENGINEERING INSTITUTE

LINCOLN COLLEGE

CANTERBURY

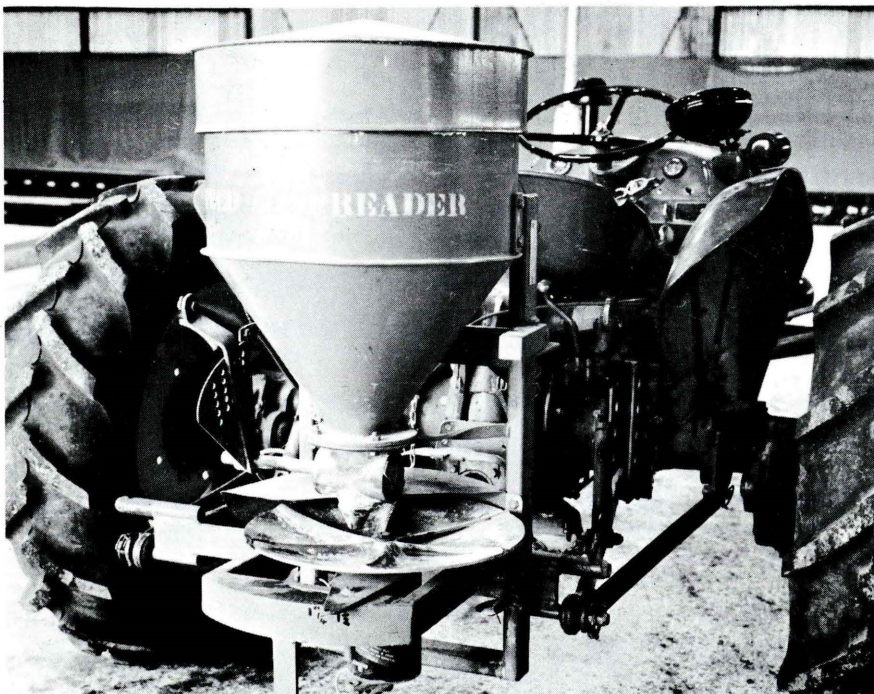


PUBLIC TEST REPORT NO. T/18

STILL AIR LABORATORY TESTS ON THE NEW MODEL TARTAN SPEED SPREADER
SPREADING GESAPON 10% PRILLS

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

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



TEST PROCEDURE:

A full description of the test procedure 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 new model 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.. 34" x 17" x 17"

Weight complete with sieve, lid and 3 point linkage.. 105 lbs

Volume of Hopper.. 1.6 cubic feet

SPECIFICATIONS OF THE MATERIAL:

Name: Farm Chemicals Co., Gesapon 10% Prills

Active Content: Diazinon

Inert Material: Calcite Chip

Bulk Density: 77.8 lbs per cubic foot

Sieve Analysis:

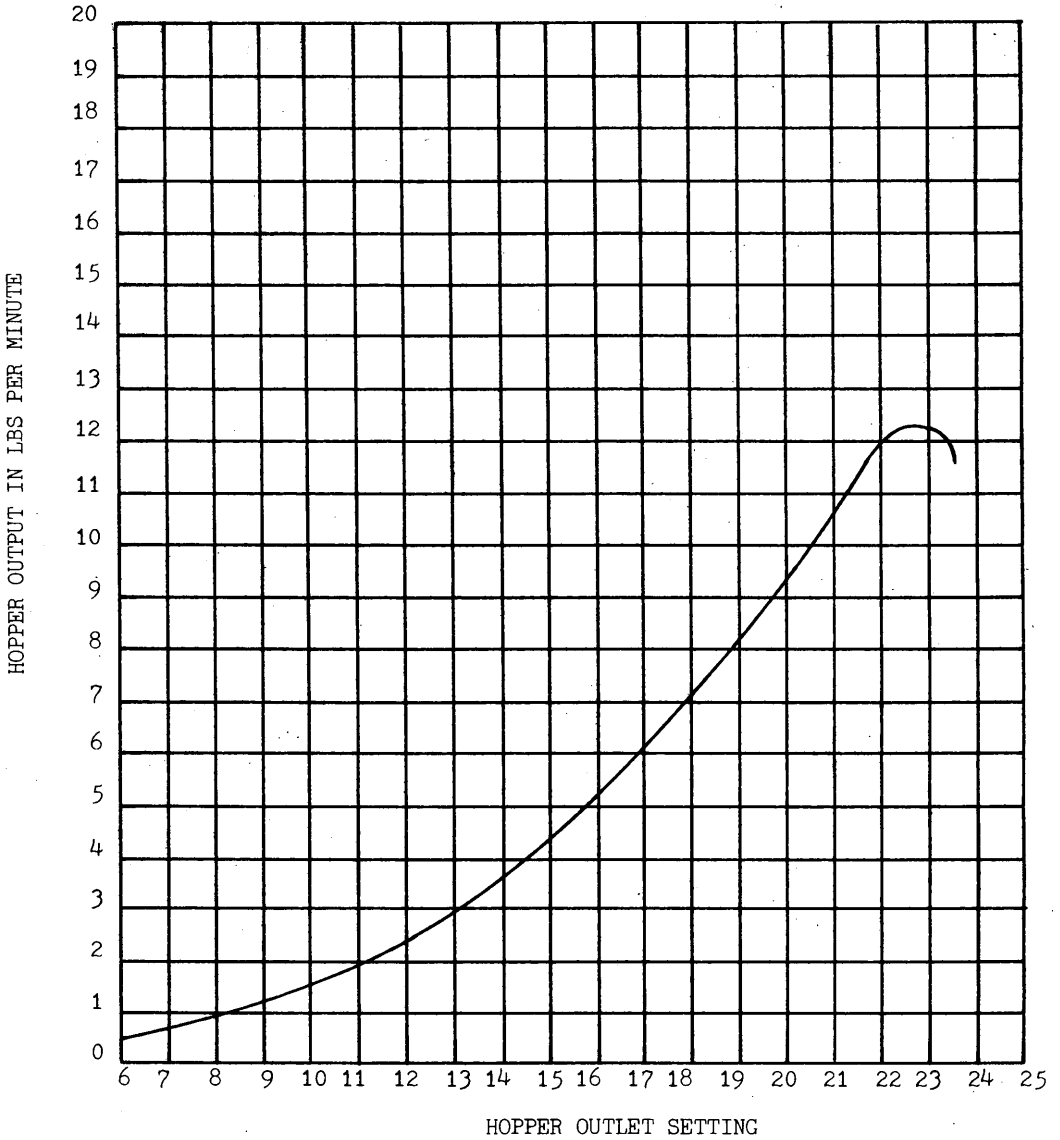
B.S. Sieve No.	% by weight
16	1.2
22	45.8
30	48.0
44	4.4
Pan	0.6

EFFECT OF DEPTH OF MATERIAL IN HOPPER ON OUTPUT:

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

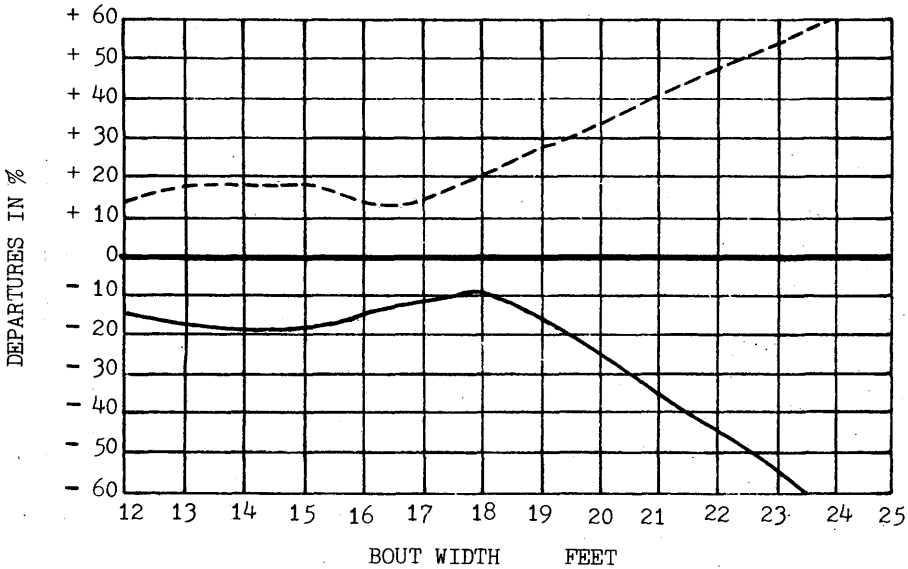
HOPPER OUTPUT

(Flow Rates)

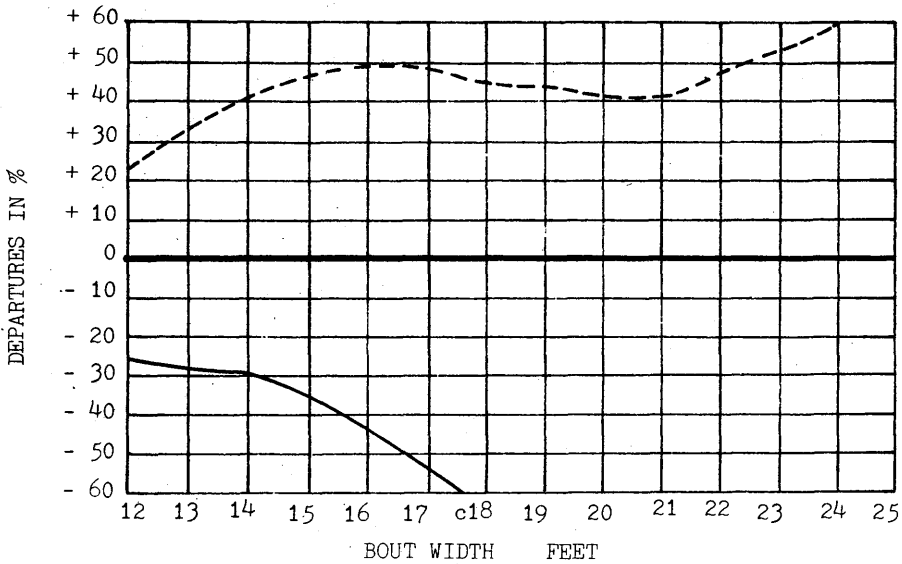


MAXIMUM DEPARTURES FROM MEAN APPLICATION
RATE AT VARIOUS BOUT WIDTHS

Mode of Travel: Round & Round
Above Mean Rate: - - - -
Below Mean Rate: ————



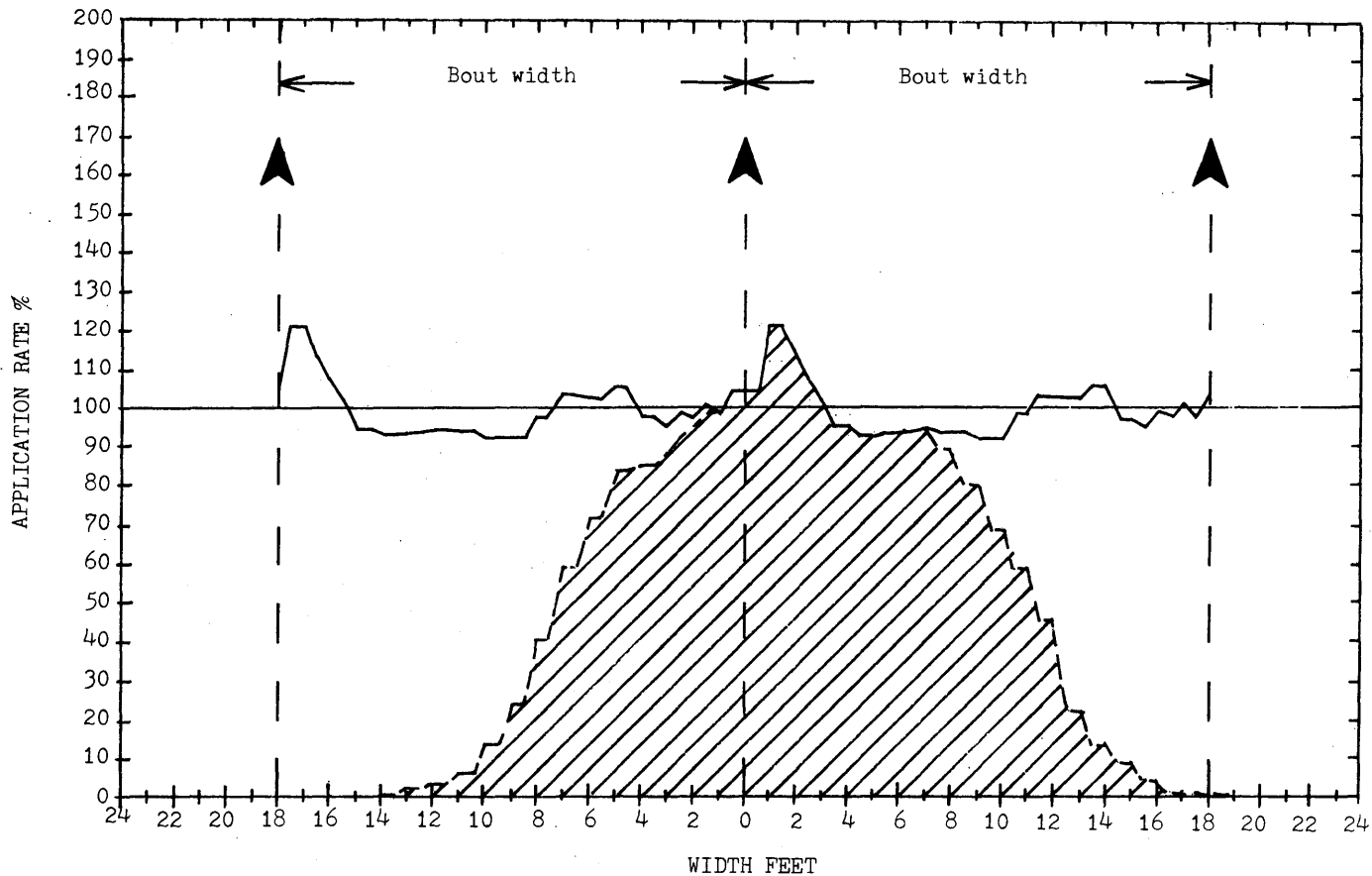
Mode of Travel: To & Fro
Above Mean Rate: - - - -
Below Mean Rate: ————



TRANSVERSE DISTRIBUTION PATTERN

Disc Setting: Disc Centre 2.0" from Outlet Centre
Bout Width: 18 Feet
Hopper Outlet Setting: 15

Mode of Travel "Round & Round"
Speed of Travel: 6 m.p.h.
Application rate: 20 lbs per acre



TRANSVERSE DISTRIBUTION PATTERN

Disc Setting: Disc Centre 2.0" from Outlet Centre

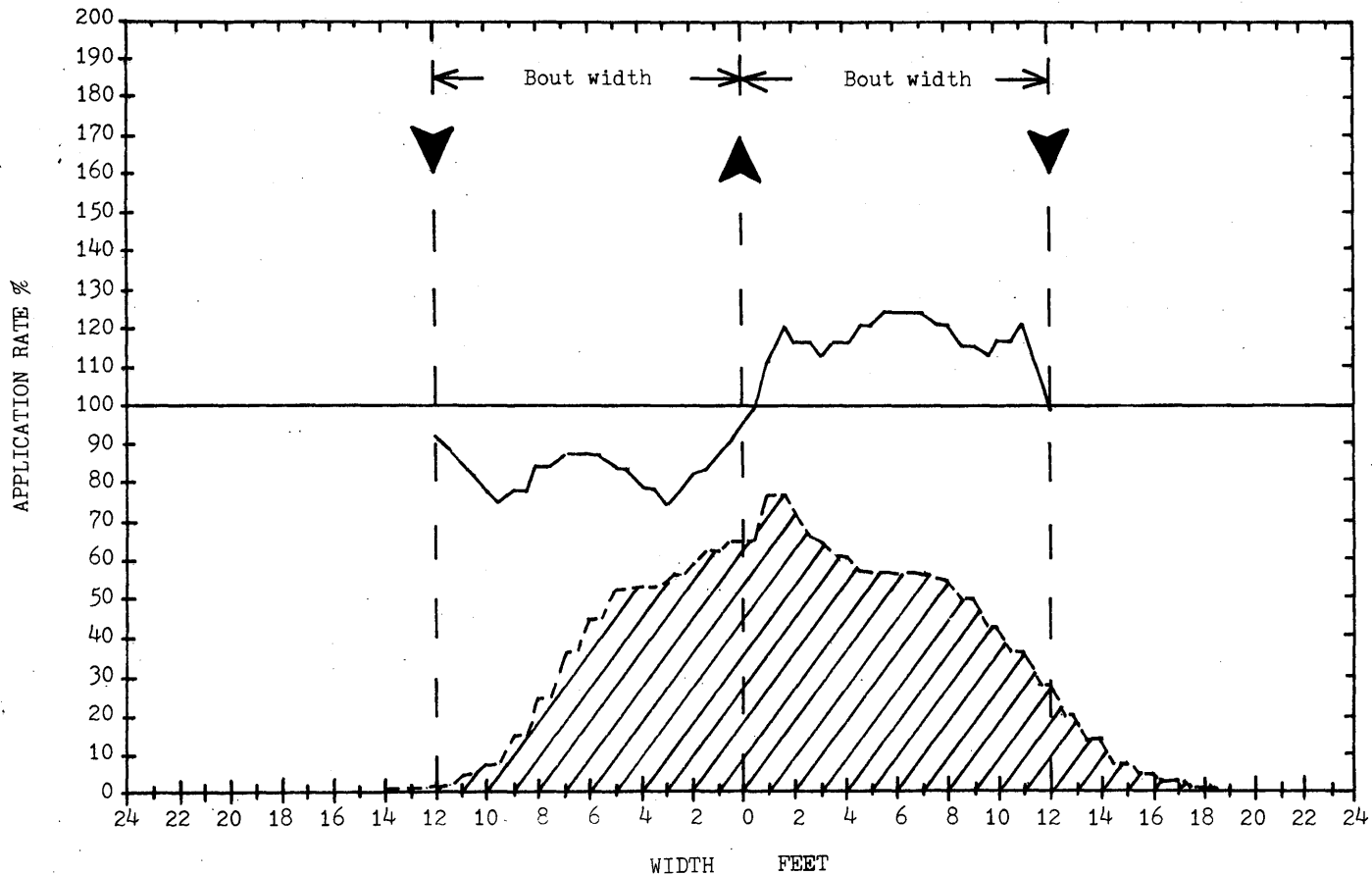
Bout Width: 12 Feet

Hopper Outlet Setting: 15

Mode of Travel "To & Fro"

Speed of Travel: 9 m.p.h.

Application rate: 20 lbs per acre

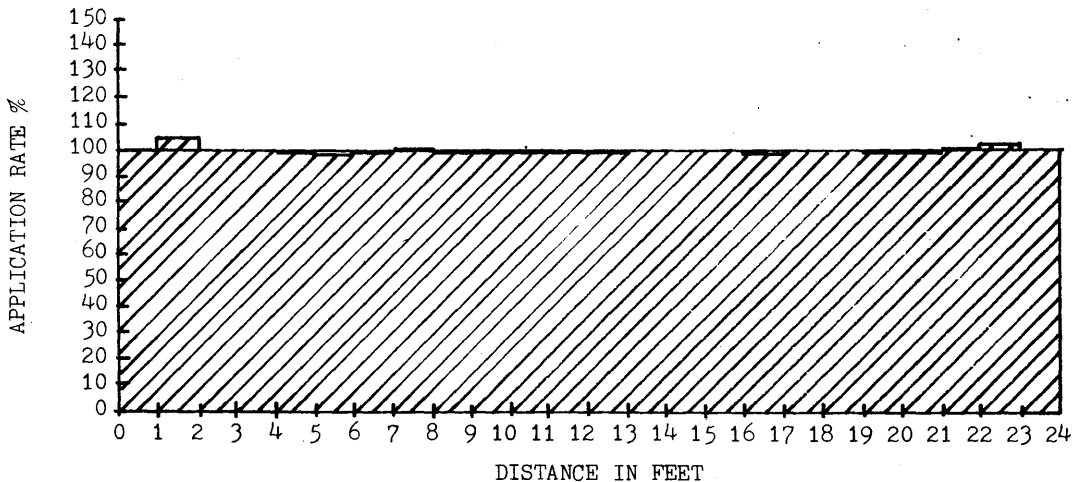


LONGITUDINAL DISTRIBUTION

Hopper Outlet Setting: 15

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

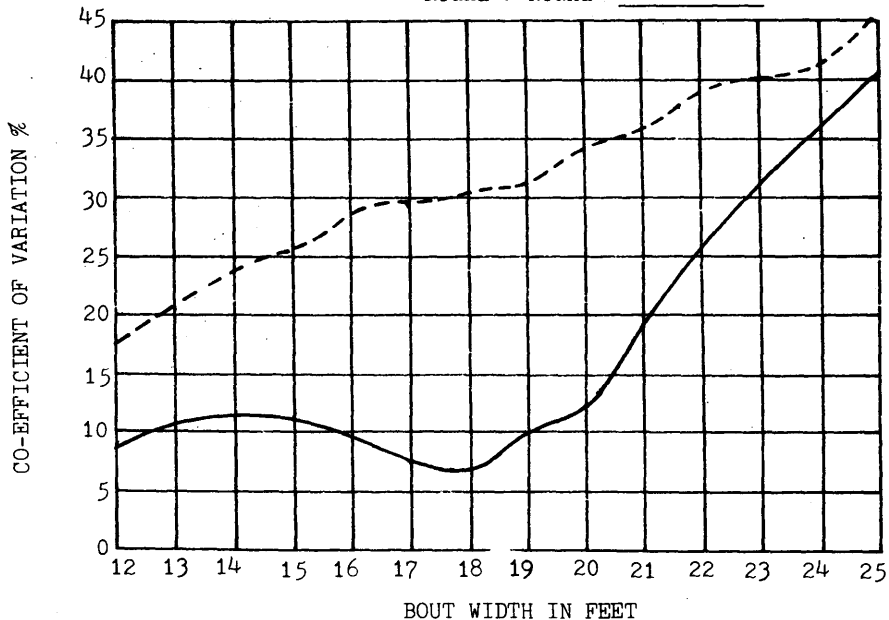
Speed of Travel: 1.64 m.p.h.



SENSITIVITY TO FLUCTUATIONS IN BOUT WIDTH

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

"Round & Round" _____



SIGNIFICANT PERFORMANCE CHARACTERISTICS:

The position and shape of the swath is significantly altered by small changes in the relative positions of the hopper outlet and disc.

MANUFACTURERS COMMENTS:

"In the New Model Tartan Speed Spreader the outlet nozzle is positioned close to the spinner to give more accurate placement of material.

It is intended to provide markings on the machine to indicate the position of the spinner relative to the nozzle outlet."

Testing Officer . [REDACTED]

Date . 15-8-69 . . .

DIRECTOR [REDACTED]