

**SAVE TIME  
SAVE LABOR**

WITH  **THE BEST**



**TWIN TANK  
MISTBLOWER DUSTER**

Liquid Payload: 3.5 gallons  
OR 1 3/4 gals. and 15 lbs. dust.  
Use the same durable TWIN  
TANKS to spray, dust, wet-  
dust and spread granules. No  
dismantling, no rebuilding.

DEEP PENETRATION  
BETTER COVERAGE  
BUILT BETTER TO LAST LONGER



**BRUSH CUTTER**

with Flexible Drive Shaft

powered by 2 1/2 HP Back-Pack engine  
of the same famous brand used on  
our Knapsack mist sprayer. World's  
most reliable 2-cycle engine. 8" cir-  
cular blade; 3" clear cut, tilt head.  
Other TARPEN-FLEX tools can be attached  
to the same flexible drive shaft:

**WEED CUTTER**

Chain Saw—Pruning Saw  
Hedge Cutter—Hoe/tiller

Flexible shaft can also be driven by  
wheeled power unit with Clinton en-  
gine or from PTO of your tractor.

**VANDERMOLEN EXPORT CO.**

378 Mountain Ave. N. Caldwell, N.J. 07006

Write for complete information



**Rainfall to order.** Specially constructed mechanical rainmaker, used on a research farm in Ambler, Pa., can deliver any desired amount of "rainfall" simply by setting a timer. Upper part of rainmaker device rolls back and forth on tracks discharging water from 12 sprinkler nozzles mounted on a 22-ft. boom. Entire machine is portable and is wheeled from plot to plot. Primary application is to determine effectiveness of new weedkiller compounds and combinations. To eliminate variables caused by normal rainfall, test plots are covered by a plastic film tent after being saturated by machine-made rain.

# Rainfall Influence on Preemergence Herbicides

"How much rainfall is necessary to activate a preemergence herbicide? How much rain must fall before the herbicide is leached from the zone of germinating weed seeds? How much rain does it take to move the herbicide to where the crop seed is germinating, with resulting injury to the crop?"

In a controlled study concentrated into a single growing season, Dr. Anson R. Cooke, Director of Biological Research, Amchem Products, Inc., attempted to answer these three questions.

While delivering a paper on the subject at the Southern Weed Conference in Jacksonville this year, Dr. Cooke pointed out how tests proved that various amounts of artificial rainfall at certain periods after application greatly influenced the performance of certain pre-emergence herbicides.

It was also noted that by substituting common soluble formulations of a product such as Amiben with less soluble derivatives of the same product, weed control often remained constantly high even when initial rainfall

varied from 0.5 to 2 inches. The more soluble forms, on the other hand, often gave poorer weed control when carried too deeply by a single heavy rain of perhaps 1 or more inches.

How were the exact amounts of moisture obtained without interruption from natural rainfall? Dr. Cooke and his colleagues worked with a unique machine which applies controllable amounts of rainlike irrigation on selected test plots. After the desired amount of water is applied, each plot is covered with a plastic tent to prevent any further natural rain from falling on the plot.

With such knowledge, Dr. Cooke concluded, it may soon be possible for a herbicide manufacturer to formulate pre-emergence herbicides on a more-or-less custom basis depending on the average normal rainfall for a given area. For example, in a normally high rainfall area a rather insoluble form of a herbicide might be provided while a relatively soluble form of the same herbicide might be supplied to areas of normally low rainfall.