

Weed Control in Processing Cucumbers - 2005

Study title: Tolerance of Cucumbers to Herbicides

Objectives:

1. Determine the tolerance of cucumber to preemergence applications of Dual II Magnum, Command, Sandea, and Outlook.
2. Determine whether the addition of Sandea to Command, Dual II Magnum or Outlook would improve weed control or increase injury in cucumber.

Materials & Methods:

Crop: Cucumber

Variety: Vlasplik M

Planting rate: 130750 seeds/ha

Row spacing: 75cm

Planting date: Jun 3/05

Depth: 2 cm

Design: Randomized Complete Block Design

Plot width: 2m

Plot length: 10m

Reps: 4

Field Preparation: Trial fertilized with 46-0-0 at 100 kg/ha and 18-19-19 at 400 kg/ha on May 20/05.

Soil Description:

Sand: 80%

Silt: 13%

Clay: 7%

OM: 4.3%

pH: 6.3

CEC 9

Texture: Loam Fine Sand

Soil: Normandale

Application Information:

APPLICATION DATE	A MAY 30/05
TIME OF DAY	11:00 AM
TIMING	PRE
AIR TEMP (c)	25
RH (%)	31
WIND SPEED (KPH)	3
SOIL TEMP (c)	26
CLOUD COVER (%)	50
CROP STAGE	PRE

Spray Equipment:

Application Method: CO2 Backpack

Nozzle Type: Flat Fan

Nozzle Spacing: 50 cm

Spray Volume: 200 L/ha

Pressure: 207 KPA

Nozzle Size: 8002XR

Boom Width: 2 m

Results:

One half of each plot in this trial was maintained weed free to examine the effect of Dual II Magnum (0.5 and 1.0 L/ac), Command (0.47 and 0.94 L/ac), Sandea (13.5 and 27 g/ac), and Outlook (0.42 and 0.84 L/ac), and tank mixes of Command+Sandea (0.47 L/ac + 13.5 g/ac), Dual II Magnum+Sandea (0.5 L/ac + 13.5 g/ac), and Outlook+Sandea (0.42 L/ac + 13.5 g/ac) applied preemergence for visual injury and yield of cucumbers. The remaining half of each plot was left weedy to collect weed control data.

The Outlook (0.84 L/ac) treatment caused slight puckering of the leaves at 7 and 14 days after emergence. However the crop outgrew this injury by 28 days after emergence.

The tank mix of Command+Sandea (0.47 L/ac +13.5 g/ac) gave good seasonlong control of common ragweed and eastern black nightshade, and fair control of common lamb's-quarters.

The tank mix of Dual II Magnum+Sandea (0.5 L/ac + 13.5 g/ac) gave good control of eastern black nightshade, and fair control of common ragweed and common lamb's-quarters.

The tank mix of Outlook+Sandea (0.42 L/ac + 13.5 g/ac) gave excellent control of eastern black nightshade, and fair control of common ragweed and common lamb's-quarters.

Marketable yield was not less than the untreated control in the Command (0.47 and 0.94 L/ac) and Sandea (13.5 g/ac) treatments. Dual II Magnum and Outlook both caused reductions in marketable yield at the overlap rate of each treatment.