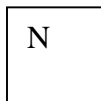
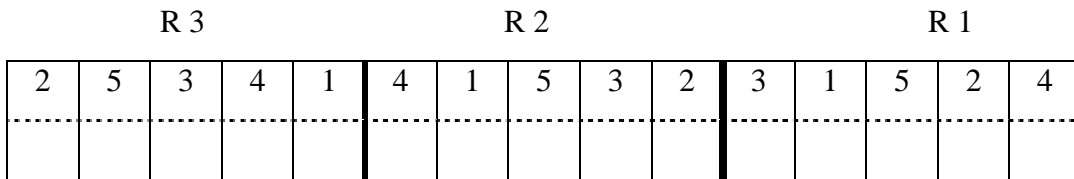


Aquatrols Trial 2006
Terrace Hills Golf Course
Altoona, IA
Nick Christians

Objectives: The objective of the study was to determine if the wetting agent Dispatch improves the penetration and efficacy of MACH II and Merit insecticides by improving penetration into the soil. The treatments were as follows:

Treatments:	Rate	water	Product/plot
1. Control	-	-	-
2. Merit	7 oz (dry)/acre	1.5 gal/1000 ft ²	3.28 g in 1.08 gal water
3. Merit + Dispatch	7oz/acre + 48 oz/acre	1.5 gal/1000 ft ²	3.28 + 23.4 ml dispatch in 1.08 gal water
4. MACH II	2.9 oz (liquid)/1000 ft ²	1.5 gal/1000 ft ²	61.74 ml in 1.08 gal water
5. MACH II + Dispatch	2.9 oz/1000 ft ² + 48 oz/acre	1.5 gal/1000 ft ²	61.74 ml + 23.3 ml dispatch + 1.08 gal water

The study was conducted at Terrace Hills golf course east of Des Moines, Iowa. Each plot measured 18 ft wide by 40 ft long=720 ft². Treatments were applied with an 18 ft boom sprayer in 3 replications. The sprayer was operated along the edge of a fairway so that 9 ft of rough and 9 ft of fairway were treated. The fairway was perennial ryegrass and the rough was Kentucky bluegrass.



Tank mix.
 There were 720 x 3 = 2160 ft² total for the 3 reps. At 1.5 gal/1000 ft², this required 3.24 gal. We mixed 10 gallons and sprayed the remaining material in the rough on another section of the course. For 10 gallons, the following amounts of material were needed.

2. 30.4 g Merit
3. 30.4 g Merit and 216 ml Dispatch
4. 572 ml MACH II
5. 572 ml MACH II and 216 Dispatch

Treatments were applied on June 30, 2006. Data on % soil moisture were evaluated in each plot with a Time Domain Reflectometer (TDR) unit on July 7 and 21 and August 4 and 15. Measurements are the mean of three readings from random areas in the plot. Grub evaluations were made on September 1 with a hexagonal greens tool with approximately 1 ft² surface area. Counts are the mean number of grubs counted from three plugs taken from the fairway area and three plugs taken from the rough. Counts are approximately grubs/ft².

Results: There were no significant differences in soil moisture among treatments on July 7, August 4 and August 15. On July 21, higher moisture levels were found in the MACH II plots without Dispatch.

There were insufficient grubs found in the perennial ryegrass fairways for evaluation of control. The control averaged 1 grub/ft² and none were found in the treated areas. There were higher grub numbers in the Kentucky bluegrass rough. There were significantly fewer grubs in all of the treated plots than in the control. Control was complete in the Merit plots with and without dispatch. The MACH II plots had significantly fewer grubs than the control and more grubs than the Merit plots. There were no differences in grub count among plots treated with Dispatch and those not treated with Dispatch.

Treatments	% Soil moisture 7/7	% Soil moisture 7/21	% Soil moisture 8/4	% Soil moisture 8/15	Grubs Fairway	Grubs Rough
1. Control	46	59	49	58	1	4
2. Merit	45	58	49	57	0	0
3. Merit + Dispatch	48	59	50	60	0	0
4. MACH II	51	68	57	67	0	2
5. MACH II + Dispatch	45	56	51	58	0	2
LSD 0.05	NS	7	NS	NS	NS	1