up with the clippings. For this reason the clippings are often returned for one or two mowings after application to a green. In addition there is concern for the effect of mowing and traffic on the coating of coated fertilizers. If the coating is broken the soluble fertilizer on the inside is readily available and the fertilizer loses its slow release characteristic.

A study was designed to evaluate the effect of traffic and clipping removal from a green on the nitrogen response from sulfur coated ureas. Treatments were applied September 26, 1977. The traffic treatments applied were none; 25 passes over every spot on the plot by golf shoe traffic; and 3 passes with a water weighted Ryan vibrating roller to which golf shoe soles have been attached. The fertilizer was applied, followed by the traffic treatments. Then the plots were irrigated. The next day the plots were mowed with clipping removal or return.

Three weeks after application the quality ratings shown in Table 6 were taken. The reader is cautioned that this is a preliminary report and the study should be repeated. But from these data it is apparent that intense traffic on the turf causes some breaking of the coatings. This allows the nitrogen contained in the particle to be watered into the turf and leads to the turf response. Thus the quality ratings were better when the plots received traffic after application, especially the intense roller traffic. Also, returning clippings resulted in a greater turf improvement for the coarser particles from TVA and CIL-standard size fertilizer than for the fine grade CIL sulfur coated urea. This is reasonable since the smaller particles would not be as susceptible to mower pickup and probably to traffic damage. The reader is reminded that the coarser particle materials are not designed for use on greens and the manufacturers do not recommend the use of the coarse particle grades on greens.

Low Soil Potassium Effects on Seedhead Formation

After 13 years of clipping removal from Merion Kentucky bluegrass plots which were treated with a wide range of nitrogen rates, a significant depletion of soil potassium occurred. In the past greater moisture stress and wilting was observed on the low potassium plots which was reported at previous conferences. In June of 1977 it was observed that there was greater seedhead formation on the plots with lower soil potassium levels (less 100 pounds per acre exchangeable potassium with neutral normal ammonium acetate). We do not have evidence that this response holds true for other grasses but it is suggested that the turf manager should keep soil potassium levels adequate if seedhead formation is considered undesirable. The level of available soil potassium can best be determined by soil testing.

Wetting Agents Effects on Hydrophobic Sands

A study of wetting agent treatment effects on rewetting of the hydrophobic sand condition was initiated at Boyne Highlands on June 9. The results are summarized in Table 7. Hydro-Wet and Aqua-Gro gave the best improvement in rewetting as evidenced by quality ratings and percent soil moisture. These results are consistent with those from previous years. Amway and Wex wetting agents also provided some improvement in quality ratings compared to the untreated check for some treatments on some dates. Higher rates and more frequent applications of the Amway and Wex materials will be needed apparently for the same degree of response compared to Hydro-Wet and Aqua-Gro. Variability among plots reduced the level of significance among treatments as had been observed in the past.

A similar study was established on the Bay Pointe Golf Course where hydrophobic spots had developed in late May and early June. However, the hydrophobic condition disappeared before any treatment differences occurred. Appreciation is expressed to Mert Nye of Boyne Highlands and Don LaFond of Bay Pointe for use of these plot areas.

Two home lawns were treated with wetting agents and combinations of wetting agents and Tersan 1991. One lawn was heavily infested with Fusarium blight, the other was not. There was no apparent difference among any of the treatments. Apparently conditions conducive to development of the disease or recovery from past injury did not occur.

Table 7. 1977 Wetting Agent Study - Boyne Highlands. Treatments were initiated June 9, 1977. Averages for 4 replications.

Wetting Agent	TREATMENT Ounces per 1000 sq. ft. Jun 9	Jun 29	Aug 10	Sep 8	Turfgrass Quality Rating (1 = ideal; 9 - poor) Jun 29	Aug 4	Sep 8	Oct 21	Average	Soil Moisture August 8
										%
Check	-	-	-	-	7.3 a*	7.5 a	5.6 a	3.9 a	6.1 a	11.6 a-b
Amway	8	-	-	-	5.0 b	6.6 a-b	4.4 a-b	3.4 a-c	4.9 a-b	12.7 a-d
Amway	16	-	-	-	4.5 b-d	5.8 a-c	3.3 b-e	2.5 a-d	4.0 a-f	12.3 a-d
Amway	32	-	-	-	4.0 b-e	6.1 a-b	3.8 a-d	2.8 a-c	4.2 a-f	13.0 a-d
Amway	8	8	-	-	5.0 b	6.5 a-b	4.3 a-b	3.6 a-b	4.9 a-b	11.7 a-c
Amway	16	16	-	-	4.8 b-c	5.5 a-c	4.5 a	3.3 a-c	4.5 a-e	15.0 a-e
Amway	32	32	-	-	4.5 b-d	6.1 a-b	3.6 a-d	2.9 a-c	4.3 a-f	13.1 a-d
Amway	16	16	16	16	4.3 b-e	4.5 b-g	3.4 b-d	2.9 a-c	3.8 b-g	18.4 c-f
Amway	8	8	8	8	4.3 b-e	5.3 a-e	3.1 b-e	2.5 a-d	3.8 b-f	15.4 a-e
Aqua-Gro	8	8	-	-	4.3 b-e	5.0 a-g	3.3 b-e	2.8 a-c	3.8 b-f	15.7 a-e
Aqua-Gro	16	-	-	-	2.3 e	2.4 g-h	2.0 c-e	2.0 b-d	2.2 f-g	19.7 e-f
Aqua-Gro	16	16	-	-	3.8 b-e	5.1 a-f	4.0 a-c	2.4 a-d	3.8 b-f	15.5 a-e
Aqua-Gro	32	-	-	-	2.3 e	2.9 d-h	2.0 c-e	2.5 a-d	2.4 d-g	19.3 d-f
Aqua-Gro	8	8	8	8	3.8 b-e	2.5 f-h	2.1 b-e	1.8 c-d	2.5 c-g	16.9 b-f
Hydro-Wet	16	-	-	-	2.5 d-e	3.1 c-h	1.8 d-e	1.8 c-d	2.3 f-g	17.3 b-f
Hydro-Wet	16	16	-	-	2.8 c-e	2.6 e-h	2.1 b-e	1.8 c-d	2.3 e-g	17.0 a-f
Hydro-Wet	8	8	8	8	2.5 d-e	1.6 h	1.1 e	1.1 d	1.6 g	22.6 f
Wex	8	-	-	-	5.0 b	6.5 a-b	4.1 a-c	3.3 a-c	4.7 a-c	13.8 a-e
Wex	16	-	-	-	4.5 b-d	5.9 a-c	4.1 a-c	3.5 a-b	4.5 a-e	13.8 a-e
Wex	32	-	-	-	3.8 b-e	5.8 a-c	3.9 a-d	3.1 a-c	4.1 a-f	12.7 a-d
Wex	8	8	-	-	5.5 a-b	5.5 a-d	4.4 a-b	3.0 a-c	4.7 a-d	15.5 a-e
Wex	16	16	-	-	4.3 b-e	5.5 a-d	3.8 a-d	3.4 a-c	4.2 a-f	12.7 a-d
Wex	32	32	-	-	4.3 b-e	3.9 b-h	2.8 b-e	2.0 b-d	3.2 b-g	17.9 b-f
Wex	8	8	8	8	5.5 a-b	7.4 a	4.9 a	3.3 a-c	5.3 a-b	10.9 a

* Numbers in vertical columns not followed by the same letter are significantly different at the 5% level by the Duncan's Multiple Range Test.