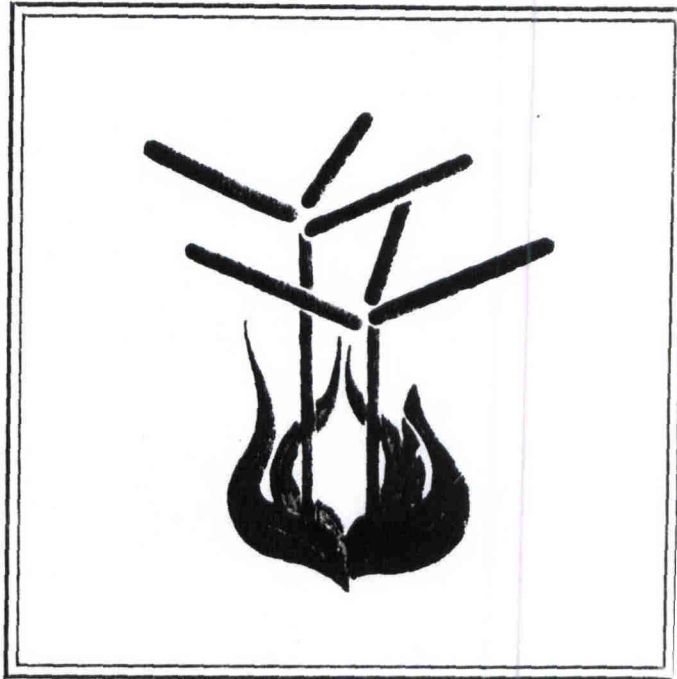
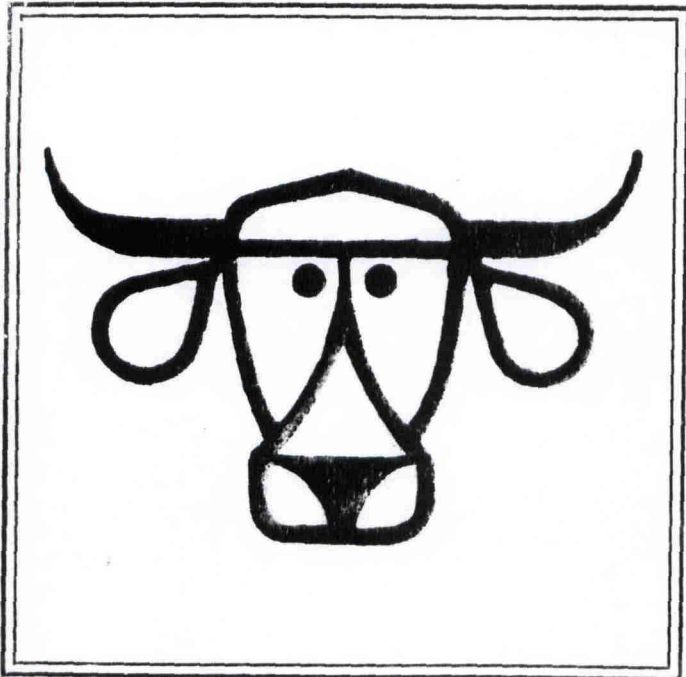
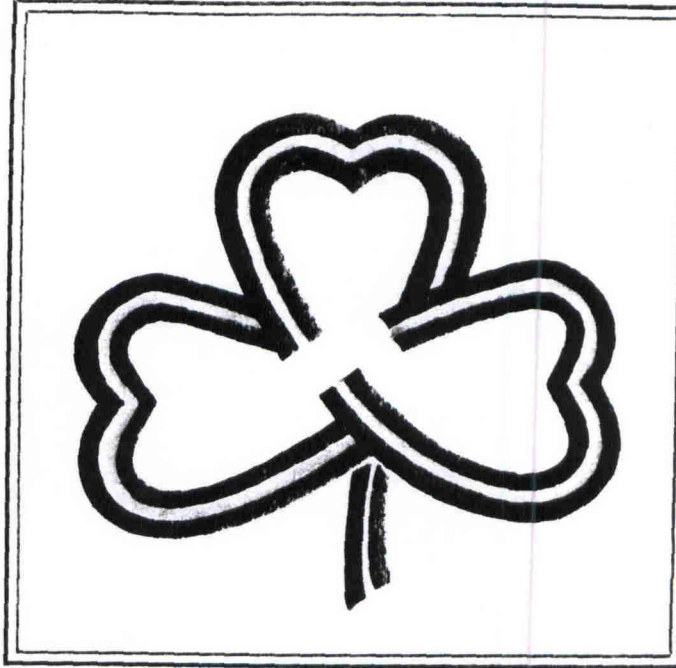


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Workers: F. M. Rouquette, Jr.  
& L. R. Nelson

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## SOIL CONTAMINATION OF RYEGRASS SAMPLES USING FLAIL-TYPE MOWER

### SUMMARY

Percent soil contamination in ryegrass samples ranged from about 32% in Tetrablend 444 to 10% in Sunbelt at the first harvest date. By the fourth harvest, the percent soil in the forage samples had declined to about 1%. An important consideration which emerged from this evaluation is that care should be given to choice of forage harvesting equipment used. This is especially critical for annual, clean-till planted crops. And, secondly, an ashing procedure should always be utilized to detect possible external contaminants and make the appropriate adjustments to the chemical parameter in assay. An illustration of the erroneous conclusions that may be made can be drawn from the first harvest data of Tetrablend 444 which had an uncorrected neutral detergent fiber (NDF) value of 62%. After correcting this data for percent soil, the adjusted NDF value was 30%. And, a 30% NDF value is more in line with expected data as opposed to 62% NDF on the first harvest.

### OBJECTIVE

To determine the extent of soil contamination to annual ryegrasses harvested with a flail-type mower.

### PROCEDURES

Ten annual ryegrasses and corresponding chemical analyses were selected from the major diploid vs tetraploid trial (Nelson and Rouquette) for the purpose of comparing neutral detergent fiber (NDF) data. Although each ryegrass was harvested five times in the clipping-nutritive value evaluation, only the first four harvest dates are shown in these comparisons. All ryegrass samples were analyzed for percent NDF and percent ash.

### RESULTS

The percent soil in each of the four harvest dates of ryegrass is shown in Table 1. Although there was a substantial range in degree of

soil contamination among varieties, the relative importance of this contamination with regard to potential animal performance was not ascertained. Further, there was no consideration given to plot location, leaf spatial arrangement, nor any other uniqueness which may have been responsible for differences in contamination among varieties. The primary concern was that these contaminants be identified and accounted for in the final reporting of the chemical data. It was interesting that the percent soil in most of the samples declined by more than 50% on each succeeding harvest.

Table 1. Percent soil in ryegrass sampled with flail harvester.

RYEGRASS	HARVEST			
	1st	2nd	3rd	4th
Tetrablend 444	31.85	11.33	9.41	2.64
Tetrone	27.41	8.22	5.28	0.54
Magnolia	25.87	9.02	4.89	1.38
Ninak	22.53	4.54	2.83	0.71
Tx-0-R-78-3	20.82	11.72	2.13	1.18
Gulf	16.75	9.93	4.75	1.22
Common	15.29	9.89	2.00	0.87
Miss	14.52	12.72	4.97	0.61
Tx-0-R-78-2	12.07	9.53	3.06	1.63
Sunbelt	10.46	6.86	5.38	0.76
AVG.	19.76	9.38	4.47	1.15