Note

HERBAGE RECOVERY OF 'MASSEY BASYN' YORKSHIRE FOG FOLLOWING A SEED HARVEST

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Abstract

Aftermath recovery of 'Massey Basyn' Yorkshire fog (*Holcus lanatus* L.) following seed production and the retention of this species as a dominant within the sward can be aohieved without the need for post seed harvest cultivation or cutting. However, where a late seed crop has been taken, nitrogen should be applied to the area to encourage the rapid recovery of 'Massey Basyn' Yorkshire fog at the expense of other grasses which may be present.

INTRODUCTION

ONE of the major concerns in the general agronomy of any grass seed crop is the management procedure necessary to return the sward to a productive vegetative state following seed harvest.

To date, such information in the case of 'Massey Basyn' Yorkshire fog (*Holcus lanatus* L.) is not available, although some details have been published for other species (Griffiths *et* al., 1967; Lawrence, 1973). This paper outlines investigations on possible aftermath recovery techniques which could be imposed to return a Yorkshire fog seed crop to a productive pasture.

MATERIALS AND METHODS

The trial area and experimental design' were as previously described (Hill *et* al., 1974), being a seed production area of 'Massey Basyn' Yorkshire fog which had been subjected to nitrogen and closing date studies for seed produotion. Immediately following harvest (January), treatments involving cultivation with a rotary hole and mowing to ground level to remove stubble were imposed on the area. These areas were also split for nitrogen (56.7 kg/ha urea) and no nitrogen treatments. Twelve weeks later (April) measurements of herbage yield and botanical composition on each treatment (3 random samples each 0.62m^2) were carried out.

RESULTS

The results in Table 1 show that there was no advantage to be gained in subsequent herbage yield by either cultivating or mowing the stubble immediately after the seed harvest. The month of

TABLE 1: THE EFFECT OF CUTTING AND CULTIVATION WITH OR WITHOUT ADDITION OF NITROGEN ON AFTERMATH RECOVERY OF YORKSHIRE FOG PASTURE CLOSED FOR SEED PRODUCTION IN DIFFERENT MONTHS

Month of Closing for Seed Production	*fallowing Seed Harvest*			*Cutting following Seed Harvest*			*Cultivation following Seed Harvest*		
	+N	*-N*	*Mean*	*+N*	*-N*	*Mean*	*+N*	*-N*	*Mean*
June:									
Herbage dry wt. (g/sample)	63.3	54.5	58.9	64.7	40.6	52.7	59.4	66.3	62.9
% Yorkshire fog	88.4	76.7		79.2	80.4		76.2	83.4	
% Other grasses	7.6	15.1		14.6	14.1		16.9	14.7	
% Other species	3.8	8.2		6.2	5.5		10.9	1.9	
July:									
Herbage dry wt. (g/sample)	52.4	43.3	47.9	62.9	38.8	50.9	45.3	68.5	56.9
% Yorkshire fog	81.6	77.4		71.6	70.8		71.4	73.7	
% Other grasses	6.7	14.6		15.2	15.1		14.2	14.2	
% Other species	11.7	8.0		13.2	14.1		14.4	12.1	
August:									
Herbage dry wt. (g/sample)	64.8	58.5	61.7	57.2	39.7	48.5	58.2	46.9	52.6
% Yorkshire fag	73.9	76.1		78.8.	61.3		80.9	60.0	
% Other grasses	5.9	11.9		16.6	12.9		6.7	36.0	
Other species	20.2	12.0		14.6	25.8		12.4	4.0	
September:									
Herbage dry wt. (g/sample)	72.5	70.6	71.6	42.9	38.6	40.7	60.4	53.3	56.9
% Yorkshire fog	48.6	15.4		73.4	50.9		42.1	30.8	
% Other grasses	47.6	66.3		18.8	38.9		20.4	36.5	
% Other species	3.8	18.3		7.8	10.2		37.5	32.7	
		Mean	60.0			48.2			57.3

closing was the time of the last defoliation prior to closing the area for seed production as previously described (Hill et al., 1974).

There was a general tendency for nitrogen application to increase herbage yield. However, a relative lack of nitrogen response in some of the cultivation treatments did suggest that some mineralization of soil nitrogen had occurred.

The percentage of 'Massey Basyn' Yorkshire fog present in the sward three months after seed harvest remained relatively constant and fairly high in the June and July pretreatments, irrespective of the subsequent nitrogen application or cultural practice (70.7 to 88.4%). With most post-harvest treatments in the August and September pretreatments, nitrogen increased the percentage of Yorkshire fog present compared with no nitrogen. In these cases there was a corresponding decrease in other grasses such as *Lolium perenne* L. and *Bromus mollis* L.

The percentage of other species (clover, weeds) including dead material was variable but was considerably increased in late closed areas (September closing) which had been cultivated following seed harvest, irrespective of nitrogen application.

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