

## ALFALFA CUTTING MANAGEMENT - CROP YIELDS 1981

*Stephen J. Herbert & Gerald V. Litchfield*  
*Department of Plant & Soil Sciences*  
*University of Massachusetts*

Several research studies suggest farmers can maximize total digestible nutrients from alfalfa by harvesting the crop when it begins to bloom but before more than 10% of the stems have flowers. Cutting at this growth stage is the best compromise between the higher quality forage of earlier cut alfalfa and the greater yield from delaying harvest for a more mature crop. Delaying harvest until 10% bloom also allows sufficient time for storing of root reserves for rapid regrowth and long term plant survival. To evaluate these responses an alfalfa cutting management study was initiated in the spring of 1981. The previous year Saranac alfalfa was seeded June 19, on the entire plateau field at the University Research Farm in South Deerfield.

Six cutting treatments were imposed. These are listed in Table 1 and except for the prebud-prebud treatment the growth stage at harvest refers only to the first harvest. The second harvest was taken when new crown shoots appeared or 10% bloom was reached, whichever was first to occur. First cut yields were increased 60% for the greater than 50% bloom growth stage, compared with harvested yields at the prebud growth stage. Second cut yields were similar for all treatments except they were slightly lower for the >50% bloom and 80% greater than the prebud-prebud treatment. Repeated early cutting as in the prebud-prebud treatment severely weakens the alfalfa plant depleting root reserves necessary for regrowth. In this study such cutting management has resulted in a grass weed problem. The weakened alfalfa stand is slow to recover and does not shade out emerging grassy weeds.

Table 1. Alfalfa yields, 1981 (hay equivalent, tons per acre).

Growth Stage	First Cut		Second Cut		Total Yield
	Date	Yield	Date	Yield	Cuts 1 & 2
Prebud*	May 19	1.78	June 16	0.69	2.47
Prebud	May 19	1.74	June 28	1.31	3.05
Early bud	May 27	2.40	July 2	1.25	3.65
Full bud	June 3	2.41	July 6	1.22	3.63
10% bloom	June 9	2.58	July 10	1.22	3.80
>50% bloom	June 15	2.82	July 14	1.08	3.90

\* both cuts taken at the prebud stage