Planting Dates For Corn

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When asked about planting dates for corn I tell farmers and students in class they should havd 60% of their corn planted by the optimum planting date. Time of planting should be based on the condition of the soil and soil moisture. The soil is ready to plant when the coulter or disc crumbles the soil as it opens a furrow and when the press wheel closes the furrow firmly. Many times weather influences soil conditions causing a delay. Because of the uncertainty of weather, farmers need to be ready to plant when the time is right.

Considerable research has shown that there is more loss from delayed planting than from planting early. To reaffirm this, a time of planting study was conducted at the University's Research Farm in South Deerfield with two corn hybrids during the 1983 season. Table 1 clearly shows the statistically significant trend of declining yields with delayed planting. The optimum planting date for this site is probably late April or the first week of May. Maximum yields were achieved from the earliest planting date when harvested at the appropriate moisture content of corn for preserving corn silage. The usual recommendation is to harvest when corn is between 65% and 70% moisture which also coincides with physiological maturity of corn, that is, no further dry matter yield is being produced. Only the first planting date, May 6, was at the desired moisture level on September 2. Later plantings were not fully matured and continued to increase in yield as shown at the September 22 harvest. However, later harvest yields were still lower than the May 6 planting harvested on September 2. These results also show that delaying harvest can also cause a silage yield reduction when the corn is allowed to become too dry. This reduction in yield was probably through a loss in leaf since earcorn yields for the May 6 planting were similar at both dates.

Table 1. Effect of planting and harvest dates on silage yield (standardized to 70% moisture) and actual moisture content on these harvest dates of two corn hybrids.

Planting Date	Harvest Sept.2				Harvest Sept. 22			
	Cornell 281		Agway 584S		Cornell 281		Agway 584S	
	t/ac	%	t/ac	%	t/ac	%	t/ac	%
May 6	30.1	68	29.5	71	26.7	54	26.1	58
May 23	26.9	73	25.3	73	27.5	59	26.9	64
June 8	20.9	77	24.4	78	26.7	61	24.8	67
June 21	16.0	82	16.2	82	19.9	71	20.4	76
July 7	11.7	84	13.3	84	14.9	77	18.6	78

Earcorn yields were reduced with delayed planting, as was the percentage contribution of earcorn to total yield (Table 2). Thus delayed planting not only reduced yields but also the quality of the corn forage.

Table 2. Effect of planting and harvest dates on percentage earcorn of total forage yield.

Planting Date	Harvest Sept. 2		Harvest Sept. 22	
	Cornell 281	Agway 584S	Cornell 281	Agway 584S
	%			
May 6	51.6	45.0	56.6	50.1
May 23	45.6	32.2	53.8	41.1
June 8	31.5	26.1	45.0	39.3
June 21	17.0	8.9	42.6	33.4
July 7	8.9	3.1	38.8	26.9

Planting in the warmer areas of Masasachusetts, such as the Connecticut River Valley, should begin in late April, and should be completed by early to mid-May, gibven the appropriate soil conditions. Optimum dates in other regions of Massachusetts are early to mid-May. Soil temperatures of 50 F 7-8 a.m., or 55 F 1-2 p.m., have been recommended as a guide to planting since corn will not grow below a temperature of 50 F. However, given adequate seed protection and a boost from a starter fertilizer if siol fertility is not in the high range, corn seed can be placed in the soil when the temperature is below that necessary for germination and growth. Delaying planting to allow soils to warm to 50 F or 55 F may cause an unnecessary reduction in yield.