

PERFORMANCE OF FIELD CORN AT SONGKHLA

Paisan Laosuwan

ABSTRACT :- *This experiment was intended to measure the performance of corn (Zea mays) in a location that corn was not grown commercially. Two well-known varieties of corn, Suwan 1 and Suwan 2, were planted at Hat Yai, Songkhla on six planting dates in 1980. Corn yielded well when planted during mid June through early October. However, the November and December planting dates were not suitable for corn due to insufficient soil moisture at the end of the growing season. Early October was found to be the best period for corn. This experiment found that Suwan 1 outyielded Suwan 2 at all dates.*

INTRODUCTION

Corn (*Zea mays*) is one of the most important field crops grown in almost all regions of Thailand. During 1978-79, the total area planted to this crop was 1.4 million hectares, yielding approximately 2.8 million tons (1).

Corn always provides a significant part of income to farmers in all regions of the country with the exception of the South, where the area under this crop has been very small, being only 5,000 hectares in 1978-79 (1). Corn may be grown in the region in upland field or in between rows of immature rubber. However, information relating to the production of this crop in the South is very scarce.

This study was made to observe the performance of this crop grown at different planting dates at Songkhla and to survey problems relating to corn production.

MATERIALS AND METHODS

Two varieties of corn, Suwan 1 and Suwan 2, were planted at six planting dates as detailed in Table 1. The rainfall distribution pattern and details about the experimental site were described by Laosuwan (3). Each variety of corn was planted at each date in eight 6-m rows spaced 1 m apart. The seed was dibbled in hills 30 cm apart. After emergence, the plot was thinned, leaving only one plant per hill. Each planting date received fertilizer doses of 93.8 kg/ha of N, 40.2 kg/ha of P and 75 kg/ha of K. All data was taken from the four central rows. Cobs harvested from all dates were either artificially dried or sun-dried before the yield measurement. Data for yield was presented as kernel weight at 15 % moisture content.

RESULTS AND DISCUSSION

Of the six planting dates tried in this experiment, the last two failed due to insufficient rainfall occurring at the later period of the crop development. Therefore, the last two dates were assumed not suitable for this crop at Songkhla. Yields of both varieties of corn were high at most planting dates with the exception of the mid July, indicating a feasible potential for this crop at Songkhla or nearby provinces (Table 1). This yielding level is quite comparable to that of the respective varieties grown in other regions of Thailand (2).

High yields in this experiment were obtained from the late August and early October planting dates. The outstanding performance of the crops grown at these dates seemed to coincide nicely with the high rainfall which occurred during this period. Although the late August planting date was quite favorable, the artificial drying of the seed was necessary as the crop was harvested at the peak of rain. The same treatment must be made to corn grown in

Table 1. Yield and other agronomic characters of two varieties of corn grown at Prince of Songkla University, 1980.

Planting date	Variety	Yield (kg/ha)	Plants/ha (actual) (no.)	Cobs/ha (actual) (no.)	Days to 50 % tasseling (no.)	Days to 50 % silking (no.)	Lodging (score)	Days to harvesting (no.)	Height at harvest (cm)
Jun 17	Suwan 1	3,136	33,858	33,858	61	68	3	115	180
	Suwan 2	2,234	33,758	33,620	55	61	1	101	170
Jul 22	Suwan 1	1,990	33,333	29,571	57	63	1	107	155
	Suwan 2	1,780	35,761	29,815	51	57	1	98	150
Aug 28	Suwan 1	4,376	41,050	41,050	55	60	1	108	220
	Suwan 2	3,405	40,935	40,935	52	54	2	100	195
Oct 1	Suwan 1	4,120	35,443	35,443	55	59	1	116	205
	Suwan 2	3,782	35,898	35,898	52	53	1	109	190
Nov 1	(not harvested)								
Dec 1	(not harvested)								
Mean	Suwan 1	3,406	-	-	57	63	-	112	190
	Suwan 2	2,800	-	-	53	56	-	102	176



June and July. Therefore, the early October planting date could be more advisable for Songkhla and nearby provinces as the rain subsides towards the end of the growing season and ceases before harvesting.

Corn variety Suwan 1 outyielded Suwan 2 markedly at all dates, indicating that this variety adapted well to our growing conditions. This variety was about seven days later than Suwan 2, grew taller, and produced bigger cobs.

This study indicates that corn may be grown at Songkhla or nearby provinces in either early or mid rainy season. However, supplemented irrigation is necessary in certain years for the early rainy season planting date due to the generally low rainfall from the onset of the season through late August. In addition, artificial drying is necessary since harvesting must be made in early September during which heavy rain should occur in most years. Thus, the most ideal period for planting corn is around late September through mid October.

REFERENCES

1. Division of Agricultural Economics. 1979. Agricultural statistics of Thailand, crop year 1978/79. Ministry of Agriculture and Co-operatives.
2. Duangchan, Weerasak. 1980. Interesting corn variety, Suwan 2. Kasikorn 53 : 369-374.
3. Laosuwan, Paisan. 1981. Influence of planting date and plant spacing on yield and other characters of soybean. (included in this report).