

Thesis Title Feasibility Studies of Planting Corn,
 Sorghum and Cowpea for Livestock in
 Dry Season

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ABSTRACT

This work had involved a feasibility studies of planting corn, sorghum and cowpea in dry season for livestock with emphasized on 3 major aspects ; weight of yield, nutritive values for animals and total cost and net return from planting. The sample used were corn (NS 1 spp), sorghum (UT 203 spp) and cowpea (BS 1 spp) planted during January-March using 3 types of crop management; control , semi-intensive and intensive, and harvested at 40,55 and 70 days after emergence.

In this work, weight of corn ,sorghum and cowpea at harvesting time of 40, 55 and 70 days after planting among 3 groups of management were determined. The highest yield was found at age of harvest at 70 days. However,

intensive and semi-intensive groups gave similar yields in both fresh and dry weight while control group gave the lowest yield. At the first harvest corn gave more yield than sorghum and cowpea.

However, sorghum could be harvested for the second time and gave a second yield which made the combined fresh weight of first and second yield increase to 4152 kg/rai .

Nutritive values of corn, sorghum and cowpea from this experiment did not differ among the 3 types of management applied but varied with time of harvest (40, 55 and 70 days). Protein content of cowpea (21.54 % dry basis) at the time of harvest being 40 days is higher than those of corn (13.16 % dry basis) and sorghum (13.10 % dry basis). These plants were more palatable with softer stem and leaves than at 55 and 70 days. Other nutrients such as fat and fibre at time of harvest 40,55 and 70 days were also sufficient for the requirement of animals.

Analysis of cost and return of corn, sorghum and cowpea showed that intensive planting required higher cost than semi-intensive and control. Planting corn using semi-intensive system at harvesting time of 70 days gave the highest return above total cost (220.00 baht/rai).

Therefore, if the farmers plant these species as forage crops for animal feed, either of the 2 type of management; semi-intensive and intensive at harvesting time of 70 days after emergence are recommended.