
ECONOMICS OF RAISING ACACIA NILOTICA ON FARM LANDS

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SUMMARY

To compare the cost of raising *Acacia nilotica* (Kikar) on farm lands under barani conditions by two common methods i.e. direct sowing vs tubed planting, an experiment was laid out in Shakargarh Tehsil during July, 1987. Costs incurred on raising of *Acacia nilotica* by two methods was calculated. Results indicate that although the method of direct sowing is easier and apparently cheaper but in the long run, the method of raising kikar woodlots on farm lands by planting tubed plants is preferable.

INTRODUCTION

The farmlands produce 90% of the fuelwood consumed in the country (Amjad, 1989). To avoid any serious crisis regarding the availability of fuelwood in future, planting of more trees on farmlands is one of the better alternatives. Now, when planting of trees on farmlands is already being recommended to farmers, it is also essential to advocate a cheaper method of raising trees. *Acacia nilotica* is one of the most commonly grown species for producing fuelwood. Its timber is used for constructional purposes, agricultural implements and pit props. The bark is in great demand by tanning industry. It is also a good fodder tree.

At present, tubed plants of this species are distributed to the farmers for planting on their farmlands. This species is also raised by direct sowing of seed in our forest areas. It was proposed to study the feasibility of raising plants of *Acacia*

nilotica through direct sowing on farmlands and also to compare the economics of the two methods i.e. planting of tubed plants and raising plants through direct sowing.

STUDY SITE

The experiment was laid out on a private farmlands at Sunduquepur village in Tehsil Shakargarh of District Sialkot. It is situated on 74° 32'E longitude and 32° 30' N latitude and its elevation from sea level is 243 m. Average rainfall varies from 5.0 mm to 236.2 mm. Average maximum temperature is 33.7°C and average minimum temperature is 11.4°C. Kikar is the predominant species of the area.

MATERIAL AND METHODS

The experiment was laid out in July, 1987 to determine the economics of raising kikar by direct sowing vs planting of tubed plants. The treatments were:

- T₁ = Planting of seedlings grown in poly tubes
- T₂ = Direct sowing of seed

Two hundred pits of 30 cm dia and 37 cm depth were made per plot at 2×2 m spacing for planting of tubed plants. For sowing of seed 200 pits of size 30 cm dia with 7.5 cm depth were made per plot at 2×2 m spacing. Sowing was done by dribbling while planting was done by removing the polythene tube from the ball of earth. The experiment was replicated four times. The seed was given hot water treatment before

sowing. There were 800 plants for each treatment.

RESULTS AND DISCUSSION

Survival data were recorded in April, 1988 and July, 1988. The average survival percentages are given in Table 1.

Table 1. Survival percentage of *Acacia nilotica* plants

Replication	Planting		Direct sowing	
	April,88	July,88	April,88	July,88
R ₁	100	94.94	27.27	10.10
R ₂	100	95.95	25.75	8.08
R ₃	100	96.46	9.09	5.57
R ₄	100	99.49	4.41	2.52
Av. survival %age	100	96.71	16.63	6.56
Actual No. of living plants	800	774	133	52

The expenditure incurred on raising *Acacia nilotica* by the two methods is compared in Table 2 below:

S.No.	Operation	Quantity	Expenditure (Rs)	
			Tubed planting	Direct sowing
1.	Clearance of site	1 acre	125	125
2.	Layout & Daghbailing	1 acre	025	025
3.	Digging of pits	800	125	-
4.	Making of spots	800	-	50
5.	Purchase of wats	1500cft	93.75	93.75
6.	Purchase of plants	1000	1000	-
7.	Purchase of seed	900 gm	-	180
8.	Transportation of tubed plants	1000	400	-
9.	Planting of plants	800	300	-
10.	Sowing of seeds in spots (five times)	800	-	200
11.	Hand watering (six times)	1600	600	600
12.	Weeding	4	250	250
13.	Transportation of bellies for fencing	80	50	50
14.	Fixing of bellies	80	62.50	62.50
15.	Fixing of barbed-wire	2500	62.50	62.50
Total expenditure			3093.75	1698.75
Total No. of living plants			774	52
Expenditure on raising of one plant for 14 months			3.99	32.67
or say			4.00	33.00

The expenditure statement shows that the initial costs for raising *Acacia nilotica* by tubed planting is 82% higher than by direct sowing. However, the expenditure for plant after 14 months was more than 8-times higher for directly sown plants.

More importantly, survival in case of tubed planting was about 97% while percentage for direct sowing was less than 7%. This caused the actual cost per surviving plant jump from Rs.4.00 for tubed planting to Rs.33.00 for directly sown plants.

CONCLUSION

Although the method of direct sowing of kikar (*Acacia nilotica*) on farmlands may appear to be easier and cheaper but in the long run planting nursery raised tubed plants is more successful and economical and hence recommended.