

Velvet beans: A superior inter/cover crop in arecanut and coconut plantation of Davanagere district.

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Background: In Davanagere arecanut is the major plantation crop covering an area of 30000 ha. Dominantly arecanut is grown as sole crop in all parts of district. This has increased the weed infestation and raised the microclimate temperature inturn leading to inflorescence drying and premature nuts falling. Some of the intercrops like banana and betelvine etc were grown. But, most of the farmers are not interested in putting effort or getting money from intercrops. Only their interest is in minimizing weed infestation, moisture conservation and fertility maintainance. They want easy ways for getting above results. Hence, velvet beans, a pulse crop can satisfy all the above requirements with minimum care and cost, Taralabalu Krishi Vigyan Kendra started popularizing the velvet beans crop as cover /intercrop in arecanut and coconut plantations.

This programme is important to the farmers because velvet bean is hardy crop needs less maintainance or care. This will spread all over the plot with in 45-50 days of sowing. This will reduce the weeds, reduces moisture loss and fallen foliage or green mulching will improves the soil fertility.

KVK Intervention

Our KVK has done an on farm trial “Assessment of mucuna as intercropping in arecanut”. Technology options viz, sole arecanut, arecanut + cowpea and arecanut+ mucuna intercropping were carried out in four farmers field. The production system ws rainfed. Some of performance indictors for technology were number of pods per plant and yield. Technology option arecanut+mucuna shown higher net return (28450/ ha), production (6.60 q/ha) and B:C Ratio (4.6) compared to arecanut + cowpea treatment which shown net return (10500/ha), production (4 q/ha) and B:C ratio (2.4)

Assesement requirement such as weed control and moisture conservation was very well happened in arecanut+mucuna option. Foliage fallen by mucuna was very large and it was added biomass and inturn improved the fertility of soil. Farmers were very happy with the results and also monitory benefit from it.

After the success of on farm trial, we started popularization in arceanut and coconut gardens. Krishi Vigyan Kendra provided nearly 150 kg of mucuna seeds to 20 farmers. The list of farmers is enlisted below.

Sl.No.	Farmers name	Address	Mucuna seeds Quantity sold (kg)
1.	Mr. Nagarajappa	Marabanahalli, Channagiri tq	10
2.	Mr. Manjunatha	Kanivebilchi, Channagiri tq	10
3.	Mr. Siddabasappa	Malalakere, Davanagere-tq	12
4.	Mr. Shivappa	Halebislery, Davanagere-tq	07
5.	Mr. Arunkumar	Halebislery, Davanagere-tq	06
6.	Mr. Nataraj	Naraganahalli	02
7.	Mr. Halappa	Davanagere	06
8.	Mr. Jayappa	Kaggi, Channagiri-tq	03
9.	Mr. Govida Naik	Kerebilchi, Channagiri-tq	10
10.	Mr. Prakash	Kotehal, Channagiri-tq	03
11.	Mr. Parameshwarappa H.C.	Dibbadahalli, Harihar-tq	05
12.	Mr. Krishna reddy	Nandihall, Harihar-tq	05
13.	Mr. Shivashankar	Kenchanahalli, Hairhar-tq.	05
14.	Mr. Arunkumar	Somashettihalli, Channagiri-tq	10
15.	Mr. Ramalingappa	Kengunte, Holalkere-tq	03
16.	Mr. Sanakki Basavarajappa	Kengunte, Holalkere-tq	03
17.	Mr. Jayapraksh	Halebislery, Davanagere-tq	16
18.	Mr. Chandrappa C.T.	Shiramangondanahalli, Davangere-tq.	03

Constraints or hurdles identified: Mucuna is spreading and climbing one. It will climb the arecanut tree. In matured trees harvesting may become problematic, since mucuna was spreaded all over the plot.

KVK provided mucuna seeds at minimum cost to farmers and gave all necessary technical crop production information. In one season the crop was spread to more than 75 acres of land. KVK also took the help of department of agriculture and horticulture for popularizing the crop. This made a good impact in popularizing mucuna.

Effect of the technology/ Process / Results / Impact:

A. Production:

Arecanut+cowpea

Number of pods per plant: 14.80

Yield (q/ha) : 4.50

Arecanut+mucuna

Number of pods per plant: 42.3

Yield (q/ha) : 6.60

B. Economic gains:

Technology option	Cost of cultivation (Rs./ha)	Gross return (Rs./ha)	Net return (Profit) Rs./ha	B:C ratio
Arecanut+cowpea	7500	18000	10500	2.4
Arecanut+ mucuna	7850	36300	28450	4.6

Price: Cowpea seeds: Rs. 40/kg

Mucuna seeds: Rs. 55/kg

C) Suitability in the existing farming / cropping systems:

Arecanut and coconut are grown as sole crops by major farmers. The weed menace and moisture shortage were major problems. The mucuna intercropping has proved answer for both problems and inturn effective in maintaining the soil fertility.

D) Acceptance of the technology/its sustainability, process in terms of views of farmers:

The technology was already accepted by farmers but its sustainability has to be checked still more seasons.

E) Horizontal spread:

It has been grown by nearly 20 farmers within an area of 75 acres.

F) Marketing channels: KVK has shown different ways for marketing of mucuna seeds. Some medicine making companies are the important vendors of mucuna seeds.