

Effect on rice yield : Cultivation of African Dhaincha fodder in rice field can result in increased yield of the subsequent rice by about 13%.

2. Cultivation of Fodder Khesari

Season and method of cultivation : Fodder Khesari can be cultivated in rice field every year in the Bengali month of Kartik (English month of November) as relay crop with T. aman rice. Seeds of the fodder should be sown in standing aman rice at least 15 days before harvesting rice. The seed rate should be about 70-75 kg/ha. It is a precondition that the soil must contain optimum amount of moisture for proper germination of seeds. However, care must be taken that there is no excess of moisture or any stagnant water in the field. After harvesting rice the fodder will start growing rapidly.

No intercultural operation or any input is required during cultivation of the fodder.



Farmer is standing in his Khesari fodder field

Harvesting of fodder and method of feeding : Just before the next Boro rice plantation, the fodder should be harvested by cutting them above the ground level. The

plants must not be pulled out with roots. The harvested fodder should be dried in the sun to make it hay and stored under shade.

To feed the animals, hay should be chopped into pieces of 15-17 cm in length if necessary, and mixed with chopped rice straw and supplied to cattle. Each animal may be supplied with 1.0 - 1.5 kg hay per day. A small amount of rice polish (about 500 g/d) should be added to this recipe for better results.

Increase in milk yield : The above feeding system consisting of the fodder Khesari and rice polish leads to an increase in milk yield of the fed cows by about 20%.

Increase in rice yield : Cultivation of fodder Khesari gives rise to an increase in yield of the subsequent Boro rice by about 8%.

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CULTIVATION OF AFRICAN DHAINCHA AND FODDER KHESARI AS ANIMAL FEED IN RICE FIELD



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THE PURPOSE OF THIS LEAFLET is to highlight the findings of an on-farm research project that can be used by the extension workers to encourage the rural farmers to adopt the technology widely.

CULTIVATION OF AFRICAN DHAINCHA AND FODDER KHESARI AS ANIMAL FEED IN RICE FIELD

Introduction

The findings belong to a research project that was funded by the Department for International Development (DFID), U.K. and undertaken by the researchers of Bangladesh Agricultural University, Mymensingh, Bangladesh and supervised by the Natural Resources Institute, U.K. The aim of the research was to adopt the technology of legume fodder cultivation in rice field by the rural farmers to sustain livestock production through increased fodder supply. It was found that cultivation of protein rich fodder : African Dhaincha (*Sesbania rostrata*) and Khesari (*Lathyrus sativus*) in rice field not only ensures the supply of high quality fodder for livestock but also improves soil fertility. The fodder can be cultivated without disturbing the cropping pattern, moreover, it increases the yield of the subsequent rice crop in addition to about 20-28 % increase in milk yield when fed to dairy cows.



Dhaincha fodder grown in seed bed

1. Cultivation of African Dhaincha

Season and method of cultivation : Seeds of Dhaincha can be sown in Bengali month of Chaitra (English month of March) in seed bed at the rate of 40-45 kg/ha. Germination rate can be increased by keeping the seeds under water for overnight and rubbing them on rough surface before sowing in the field. The rate of germination can also be increased by dipping the seeds in warm water for a minute and drying them by spreading in shade.

Preparation of cuttings : When the height of the plants are more than a metre, cuttings can be made by rejecting 50 cm at the base of the plant. Each cutting should be of about 50 cm in length. The cuttings must be done at 45° angle and care must be taken so that the bark can not be damaged or bruised.

Planting of cuttings : Cuttings of Dhaincha fodder can be planted in Boro rice field following two methods:

(a) By planting the cuttings in between the lines of standing rice plants. The distance from cutting to cutting should be 25-30 cm. The fodder will remain in the field even after harvesting rice.

(b) Other method of plantation is that, just after harvesting Boro rice, the cuttings should be planted in the fallow land. The method of plantation is same as has been described in section (a).

In both cases the fodder will remain in the field until the next rice crop.

No intercultural operation or any input is required during cultivation of the fodder.



Dhaincha fodder grown in rice field

Harvesting fodder and method of feeding : Fodder should be harvested by cutting its top edible portion. The harvested fodder should be chopped into pieces of 15-17 cm in length. These chopped fodder should be mixed with chopped rice straw and then fed to cattle. The chopped fodder may be fed to the animals at the rate of 1.5-3.0 kg/day depending on the availability. It is better to supply a small amount of rice polish (500 g/d) to the animals.



Cow is eating fodder mixed straw

Effect on milk yield : The above feeding system consisting of Dhaincha fodder and rice polish has been found to increase milk yield of cows up to 28%.