Agriculture Update, Vol. 3 No. 3&4 : 398-401 (Aug. & Nov. 2008)

A Case Study :

Prospects of indigenous practices for promoting sustainable farming in dryland agriculture

P. SUMATHI AND T. RATHAKRISHNAN

See end of the article for authors' affiliations

Correspondence to:
P. SUMATHI
Agricultural Extension, Krishi Vigyan Kendra, Vellore, VIRINJIPURAM, (T.N.) INDIA

Accepted : *February, 2008*

ABSTRACT

Indigenous knowledge of a farming population living in a specific area is derived form the local people past experience, both that handed from previous generations and that of the present generations. Indigenous practices are more popular in dry farming. Certain practices continued to be used by the farmers because of their relevancy contributing to the yield and productivity of the crop. In pest control the earlier approach was pest eradication in the mid period the concept was changed as pest control. Ecological imbalance resulted in both the situations. Now the ecological balance has been maintained through pest management by using plant products for plant protection. All these efforts resulted from the farmers practices as they were pioneer in their innovative approach. Lot of scope is there to intensify the use of farmers practices for achieving sustainability in agricultural production.

Key words : Dryland agriculture, Sustainable farming, Relay cropping, Inter cropping

Dryland agriculture plays an important role in the food system of India. Drylands constitute 75% of the cultivable lands and produce about 42% of the country's food. There has been a tremendous increase of the use of modern technologies in boosting agricultural production. However, farmers of dry farming areas faced constraints in using them for several reasons. For a number of years farmers in these areas have practiced the age old practices, but no longer these methods are adequate to increase the productivity. Considering the cost benefit ratio, the traditional practices are less expensive, easier to adopt, readily available in the system and hence some practices are still under use because, of their relevancy in contributing to the yield. This paper focuses on some of those practices.

Summer ploughing:

After the harvest of the previous crop, land is tilled immediately, which helps in burying the weeds affecting the crop at its various stages. By unearthing the pupal cases of the insects, having them to destroy by sunlight and birds. More moisture is also conserved in the soil. Because of the summer ploughing weeds and insect problem get eliminated in the next cropping system.

Finger millet:

Heavy seed rate is followed by inter-cultivation with traditional palluku, which ensures optimum plant stand, also reduces the cost of labour for hoeing, weeding and thinning.

Under rainfed finger millet seedlings are planted in holes made with a crowbar and pot watered. This helps quick establishment of seed, brings in advance of the receipt of rains. No preparatory cultivation is given under this situation.

Sorghum:

Sorghum seeds are pre soaked in water. Often the soil moisture in dryland is inadequate for germination of seeds. The pre - soaking helps to induce quick and uniform germination.

Sorghum seeds are pre-soaked with cow urine, pelletized with copper sulphate at 1: 1 ratio and dried under shade. This seed hardening technique induces tolerance to drought besides protection against smut disease

Long duration sorghum and short duration pearl millet seeds are mixed 1:5 and sown as rainfed crop, in which pearl millet comes to harvest earier afterwords sorhum grows well and gives better yield.

Sorghum seeds are well dried and stored in under ground pits 3-5m below ground level which type of storing prevents weevil attack.

Relay cropping:

One month after the sowing of sorghum *i.e.* during hoeing and weeding, cotton seeds are dibbled.

In ground nut -cotton relay cropping, cotton seeds are broadcast at the time of hoeing and weeding in ground