

A case study on the “Traditional agricultural practices of indigenous people” in Paderu Mandal

Nitish Bharadwaj¹

Paderu mandal in Visakhapatnam district is a hilly landscape engulfing 26 villages in its ambit, completely inhabited by tribal community. Farmers in Paderu have sought their own way of maintaining biodiversity in the rain dependent hinterland of coastal Andhra Pradesh. In less than 2 acres of land, people sow more than 10 seeds not separately but in complex fashion. Broadcasting seeds on land with a fistful having more than ten different types of seeds makes the crop composition intermingled with each other. Such agricultural practices have not come in the wake of aberrant climatic conditions or increasing crop diversity but from their forefathers and people here have been practicing this method since ages. The subject is further polished with the fact that it is without the use of any chemical fertilizers. Therefore, it can be said that agriculture, here defines its course with natural ecological processes and hence can aptly be called as Zero budget natural farming.

In paderu, a farmer possesses two kinds of lands: Revenue land and Forest land. Farmers here call revenue land as individual lands in which only paddy cultivation is done. In the up hills exist the forest lands where villagers perform mixed cultivation. In the view of manifesting traditional knowledge related to mixed farming and the challenges that a farmer faces out of it, we have zeroed down the study on mixed cultivation taking place in forest up hills. For taking up this study, one to one interaction with 28 farmers and four FGDs from seven different villages has been conducted. The villages included in the sample are distant apart and chosen as such to ensure that any agriculture activity is not influenced by any other.

The average land holding in mixed cultivation that a farmer possesses in Paderu ranges between 1-2 acres. The crops in mixed cultivation include Finger millet, little millet, barnyard millet, foxtail millet; black eyed pea, photo lentil, pumpkins, Sorghum, Pearl millet and others. It can now be inferred that how farmers in Paderu have hit upon the solution for enhancing crop

With introduction of Forest Rights Act, a few tribal have got forest titles and for others it has been approved, but not issued a title. At some places where titles have been issued, however NREGA funds are used for activities like stone bunding, but farmers claim that the title is still not enough for getting crop loans from the Bank.

diversity from the same amount of land. Unaware of the significance of crop diversity, they are of the opinion that mixed cultivation gives them more profit in the end. Villagers believe that for boundary or line by line cultivation, they would require more land and therefore farmers feel that the knowledge that they got from their forefathers i.e. directly broadcasting mixed seeds in the field is the only option that they are left with.

On account of rainfed area, agricultural practices start in the month of May, just before the monsoon hits and continue till December. Villagers claim that lack of mechanical implements does not hinder them from cultivation as the region is blessed with sufficient rainfall till October. However a farmer can only bank upon suitable amount of rainfall because in case of heavy downpour, more damage to the crops can come about in intermingled fashion of cultivation and since Paderu area often experiences heavy rainfall, there remains a possibility that farmer is left with only few crops out of all the crops sown.

One can also view these villages as a paragon of organic/natural farming. 100% farmers in our survey were applying organic fertilizers like cow dung. Application

Practice of broadcasting seeds of multiple crop varieties
K Bunjubabu from Digumadhaputtu village says "that I have 2 acres of land in which I sowed 12 seeds last season because more crops gives me more profit. I directly broadcast the seeds because I do not own more land and it also requires less time and labor. I would also like to undergo training for line by line cultivation"

of natural fertilizers like Farm Yard manure also contributes in maintaining the ecological balance of the system. The environmental importance of organic matter content is its capacity to limit physical damage and to improve nutrient availability as well as biological activity. Therefore it can also be referred as "the natural way of farming" or "do-nothing farming". It refers not to lack of effort, but to the avoidance of manufactured inputs and equipment. One can be sure that agriculture does not leave any footprints on the natural ecosystem until it is driven by organic/natural farming.

Already stated, the cultivation season starts from May (just before monsoon starts) in which land preparation is done with the help of co-farmers. The land preparation practice includes bush cutting and land plough and continues till next 15 days. It takes nearly 7-8 persons per day to gear up the land for cultivation. Land preparation work goes in coordination with other farmers and therefore they do not make any payment. In comparison to systematic/line by line cultivation, the traditional method followed by Paderu villagers is less labour intensive.

After land preparation, seeds that are collected from the produce during last season are sown in start of June. This practice requires least labour as it involves only throwing a fistful of mixed seeds in one portion of the field and likewise covering the whole area subsequently. The major reason behind indiscriminately broadcasting of seeds is their perception that they would require more land in case of separate cultivation. They have cognition that 4-5 acres of land is required for separate cultivation and this assertion might arise in the backdrop of being unaware of any other method.

Zero Budget Natural Farming

Step No.	Activities	Requirement
1	Land Preparation	120 man-days
2	Applying fertilizers	No fertilizer/FYM
3	Seed sowing	Only stored seeds used
4	Weeding	Self
5	Harvesting	Self
6	Collection of seeds for next season	Self

With all the due care given by a farmer during gestation period, harvesting season starts from the month of September. Owing to different gestation period and intermingled fashion of crops, people have to be prudent enough so that it does not damage the other crops. More facile it was during sowing; the more exacting it is during harvest. One by one all crops are harvested till December after which the land is kept fallow curiously waiting for next monsoon season to arrive.

People also claim that they experience different output/yield of particular crop over the years. Although it may be attributed to varying rainfall patterns over the years but it may also be suppressed by more dominant crop specie

growing adjacent to it, briskly consuming the soil nutrients. However it is just a construct, not a proven fact. Villagers also propound that during heavy rainfall they experience more crop damage in case of mixed cultivation as compared to few farmers who started doing line by line cultivation. With all these impediments and desire to learn new method connected with natural farming only, 100% farmers in our survey asserted that they need training for systematic cultivation of crops.



From the above discussion one may be apprehensive about the method of traditional farming- whether it is a suitable fit or requires any change.

However, the method requires no cost but it is evident that the advantages of traditional agricultural practice also possess positive correlation curve with disadvantages and there are some challenges appended in following traditional agricultural practices. The major challenge faced by farmers is in terms of output/productivity as compared to systematic farming. However if some alterations can be incorporate in traditional practice, then it could turn up as the apt model of cultivation and can be regarded epitome in agriculture.