

Natural Farming in Jharkhand

A few issues, concerns and recommendations

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Due to several methodological limitations, this report can be considered as empirical insights concerning natural farming (NF), juxtaposed with conventional farming (CF) as practiced by the farmers.

- Evidence drawn from 151 sampled farms in 8 districts of Jharkhand state, practicing NF since last 9 years
- Compares NF with the 'conventional' farms in terms of
 - farm characteristics,
 - cropping choices and management practices,
 - nutrient and labor use, and
 - production economics
 - Soil physicochemical and microbial properties
 - Energy use & emission potential from predominant crops

The insights of the study propose a systems model for NF based on the evidence generated from field research. This note considers natural farming as, "Multicomponent farming, where the farm input comes from within the farm through recycling."

Key issues identified from the study :

1. Defining and comparing natural farms in farmers' fields is difficult when defined models are not followed completely
2. Long tradition of reductionist research in agricultural sciences, with a handful of short-term policy indicators (yield, profitability) to judge success
3. Favorable biophysical conditions, soil health, and access to irrigation seem to be drivers of NF's success
4. Barring the inputted value of labor, the labor cost is lower in NF because of involvement of a higher proportion of family labor; whose supply is influenced by family size, type, migration pattern etc
5. There may not be any significant effect of NF on several system outcomes like cost of cultivation, gross revenue, profitability, and productivity, except a reduction in the cost of inputs, which may get balanced out by higher labor costs
6. Most of the NF implementation draws on women's group, potentially increasing undesirable unpaid workload for farm women

7. Unsupervised application of organic manure affects both energetics and emission, their close monitoring is required to maintain the environmental advantages of the NF.
8. Accounting the exact cost value of biomass and labor may be challenging

Recommendations :

1. Develop mutually agreed frameworks and parameters to assess the success of NF bringing science and practice closer
2. Develop supportive ecosystems (provisioning for irrigation, institutional development, value addition, market integration, etc), before moving into lesser favorable areas
3. NF must go beyond the homestead or small plots, a scale up drive on the same farms is essential in addition to expansion to other plots
4. Monitor soil health in NF through examining enzymatic activities of microbes, microbial count, and screening microbes to identify novel consortiums
5. Benefits of the larger land pieces under NF must also reach women, in addition to the homestead level benefits
6. Preferably less resource intensive crops to be given importance in the cropping system at the initial phase
7. Multi-cropping systems that produce higher biomass to be encouraged
8. Revive common property resources and fallow land for farm inputs such as fodder, bioinputs, biomass, fuel etc
9. Build circularity in the local agroecosystems through models such as agroforestry
10. Develop framework for accounting ecosystem services in NF, further developing record keeping journals for farmers in NF projects
11. Encourage producer-seller conglomerates to facilitate
 - a. market access
 - b. Premium price
 - c. Payment for ecosystem services
 - d. Risk management support