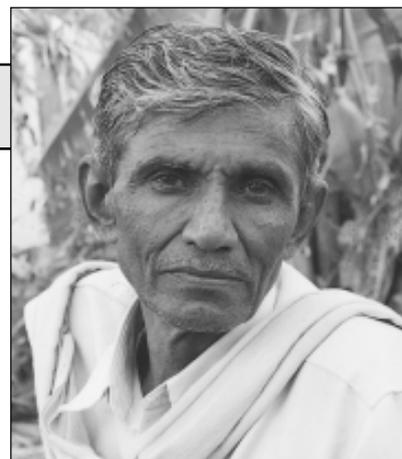


## Participatory technology and development



The research in agriculture has been confined to laboratories of the Research Institutes and Universities. The scientists most of the times, are not exposed to the ground problems faced by the cultivators. However, farmers did use the transferred technologies very efficiently. But, if the scientists can join the farmers in any new research or while introducing a new practice it can help the farmer more effectively. Also, the scientist can get new ideas in identifying and solving the problems.

During 1976 – 77 monsoon, the extension officer of the Agriculture University, introduced a new technology of cultivating soyabean as an intercrop with rainfed maize crop. It was advised to prepare 2' x 2' ridge and furrow and to dibble the maize with a spacing of 1 foot within a row and 2 feet from one row to another. Soybean had to be dibbled at a distance of 4 inches between the maize rows. This is a very good practice as we can get 3 to 4 quintals of soyabean additionally, spending only on soybean seeds. Further the soyabean plants provide a live mulch, suppressing weed growth, and supplementing nitrogen for maize crop. Accordingly we prepared 2' x 2' ridges and furrows uniformly. Just before dibbling maize seeds, I thought about earthing up of the maize (supporting maize plants with mud to discourage lodging when the maize crops grow big and heavy). This needs minimum 1.5 feet vacant place between 2 rows of crops. If we had planted maize at 2 feet from row to row and planted soyabean in the center we would have had only 1 foot distance between every maize and soyabean row.

Ideas were drawn on a sheet using different spacings. Based on that I decided to prepare ridges and furrows again at 2 ½' x 2 ½' and 1 ½' x 1 ½' rows simultaneously. This way it was possible to dibble 2 rows of soya bean between 2 ½' x 2 ½' rows and keep the simultaneous 1 ½' x 1 ½' rows vacant for using it for digging mud at the center for earthing up the maize plants. I ploughed back the whole area and prepared the land accordingly. This little change in designing the rows also had the same population of maize and soyabean, still making available space for earthing up. The scientists who visited the land several times, appreciated the modification in the preparation of land for sowing.

Most of the literature available or taught for preparing neem solution for pesticide use says that to prepare 15 litres of pesticide, one needs to pound 1 kg of well dried neem (free from fungal attack), tie it in a cloth and soak in water. This way, for preparing 225 litres solution for 1 acre, we need 15 kgs of pounded neem seeds tied up in cloth bundles. It is better not to tie in the cloth, instead soak directly in water and mix it thoroughly, and strain the mixture in a cloth. The product will be much better, as it gets mixed easily than being tied in a big cloth bundle.

As a pest management measure, the extension officers mostly recommend to hold a long string by 2 or more people, above 8 inches from the paddy fields and move it fast. This will make the insects on the crop, fall off into water mixed with kerosene

and get killed. This is a difficult job for the men moving the string, demanding bending their bodies all the time. But, farmers have found that only one person can do this job shaking the paddy plants with 6' to 8' long bamboo branch, just by walking. It would be better if the scientists could appreciate such innovative practices adapted by farmers and popularize them through their extension workers.

Some farmers have reduced the cost of drip irrigation system by installing lateral pipes at 4 feet distance instead of 2 feet, to grow vegetables by shifting the laterals at necessary intervals of time. They laid one drip line at a distance of 10 feet between rows and planted banana on both sides in a zig zag way, so that they were 2 feet away from the drip line. This not only saved a lot of money but also water consumption, accommodating more sun light. It is also more spacious for growing vegetables and inter cultivation among banana after vegetable harvesting.

If the research scientists and the innovative farmers get together in research and development of agricultural technologies, they could be more efficient and useful for the welfare of the country and farming communities.

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