

Spiritual management of natural resources

for climate smart agriculture, global food and livelihood security

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Today India is facing a great challenge of degraded natural resources like soil, water, plants, and air. Because of intensive agricultural practices, farmers are using indiscriminate doses of chemical fertilizers and pesticides due to ignorance and greed. This results in soil erosion, soil acidification, loss of soil microbial activities and great increase in pollution level leading to floods, famines and droughts etc. along with poor soil health and fertility. In the light of these facts and figures, one can easily conclude that the real problems today are not economic and political but organic, spiritual and moral. Hence, the lasting and eternal solutions to these problems can be found only in Spiritual Natural Sustainable Organic Farming System.

Key words: Climate smart agriculture, Natural resources, Organic farming, Spiritual management

AGRICULTURE is the way of life and living in India, and it is said that “No culture without Agriculture”. Because of farmers and agricultural experts, India has been able to produce 275 million tonnes of food grains in 2018-19, against only 50 MT in 1950, and in Uttar Pradesh production is 60 million tonnes against about 12 million tonnes in the corresponding period. Uttar Pradesh has been rewarded ₹ 2 crore for the highest oilseed production in India for the year 2018 and 2019. India is a country of villages and farmers, specially 91% small and marginal farmers better known as peasants, form the backbone of Indian Economy but unfortunately are mostly neglected.

Sustainable natural farming system

Innovative concept like Spiritual Natural Sustainable Organic Farming System through 5M by farmers of Uttar Pradesh and India involves application of

- (1) Microbial Organisms (Padmasri Subhash Palekar's Low Budget Natural Agriculture) i.e. Organic manures (Beejamrit, Jivamrit, Green manuring, FYM, NADEP

- Compost and Bio fertilizers) along with practice,
- (2) Meditation i.e. Positive thought energy,
- (3) Mantras,
- (4) Music,
- (5) Agricultural operations as per movement of moon.

Researches have proved that all these practices in combination can transform Indian agriculture in respect of changes in DNA, higher percentage of seed germination, increase in size and quality of grains, profuse tillering, healthier root and stem system, better leaf growth, healthy products, increase in grain's shelf-life and right production and productivity.

Microbial organisms (organic farming)

Subhash Palekar's Natural Farming (SPNF) has been accepted by Government of India and this system will be adopted in a big way. Natural organic agriculture is the only answer for sustainable agricultural growth in India. Sustainable Natural Agriculture may be defined as entire set of agronomic and organic practices that are economically viable, technically

feasible, environmentally safe and socially acceptable. It recommends the use of such agricultural practices which are biological in nature, eco-friendly and preserve environment and biodiversity. Organic Natural Agriculture is a holistic production management system which promotes and enhances agro-ecosystem health including biodiversity, biological cycles and soil biological activity. It emphasizes on *in-situ* management practices in preference to the use of off-farm inputs, taking into account that regional conditions require locally adopted system.

Organic/Natural Farming helps in creating an ecological balance and a micro-environment suitable for health and growth of soil micro-organisms, micro-flora and fauna, animals, farm workers and finally the vast population of consumers.

The resource conservation agriculture practices include minimum tillage, letting crop residues get back into the soil instead of burning them, immaculate land levelling to ensure the even spread of water and applying only need-based manures-fertilizers and water to crops. They protect soil health to



enhance its fertility, prevent the environment pollution caused by burning of crop residues, save on the labour and energy required for repeated land tilling, and reduce the use of water in agriculture, sparing it for other purposes. The biggest advantage is that by letting biological residues back into the soil, it transforms agriculture from carbon emitter to virtual carbon sequester by converting cropland into a carbon sink. Organic agriculture can be understood in the following one line of renowned ancient agriculture poet Ghagh:

“जाको खेत में पड़ा न गोबर,
उस किसान को जानो दूबर”

Women farmers in India are an asset to Indian agriculture as they contribute almost 95% of agricultural operations starting from sowing of seed till produce reaches to the consumer but they have not been given due importance that they deserve. So women farmers must be given top priority in organic natural agriculture because they perform agricultural practices very skillfully, emotionally and with perfection.

Meditation i.e. positive thought energy

The acceptance and recognition of thought power is increasing worldwide. One of the important reasons is that now population is aware of non-monetary inputs for safe farming and food as well as improvement in soil health. The positive thoughts have been found to bring positive changes increase in water use efficiency, seed growth and development of crop plants as well as health of people.

Vibrations of human beings and sensitivity of nature definitely affect the environment, crops and plants. Agricultural produce too, would therefore, be deeply influenced by the positively charged vibrations of Rajyoga Meditation to yield nutritious crops, vegetables, fruits in greater margins at a lower cost. These positive changes were shown experimental farming at Brahma Kumari Spiritual University, Mount Abu.

Sustainable Yogic Farming, an innovative concept involves practice of Rajyoga Meditation along with the

application of *in-situ* management, organic manures and biofertilizers and successful results have been obtained from trials conducted at S.D. Agricultural University, Dantiwada, Gujarat. On the basis of review regarding effect of Rajyoga Meditation on plants, scientists of G.B. Pant University of Agriculture and Technology, Pant Nagar have also conducted agronomical field trials on some of the crops. Important findings of various researches of Rajyoga Meditation showed improvement in seed germination, marginal increase in test weight, healthier root modulation, enhanced soil micro-biological activities, drop off in the insect-pest damage, increase in nutritional values, enhanced phosphorus content in the soil, appreciable increase in appearance and taste of crops, fruits and vegetables, along with increase in shelf-life. Thus the power of thoughts has been found to play a vital role in transforming Conservation Agriculture as well as human health.

Mantras in transforming agriculture

Mantras are the group of positive sounds made up of combination of different words.

Ashok Srivastava, Pradhan of Village Uchchar in Raebareli district of Uttar Pradesh, used the following inspiring lines of the poem “Karmavira” of Ayodhya Singh Hariaudh to energize the villagers:

“देखकर बाधा विविधा बहुविधा घबराते
नहीं। सैकड़ों मरु भूमि में नदियां बहा देते
हैं वे।”

Inspired villagers were motivated to dig a drain of 1.5 m deep and 3.5 km length. This helped in the irrigation leading to a bumper crop in sodic lands.

Almost every Indian is well aware of the power of Mantras which can bring desired change (positive or negative) in every walk of life and mantras are now-a-days being recognized as the healer against disease and pests, and the food products are qualitative and quantitative both, giving a good income to farmers. These sounds give positive effect on sense of animals and plants while negative sounds

deplete energy of both plants and animals. Mantras as *Nada* and *Brahmanada* have impact on mind and body. Regular observation of Yagna and Agnihotra, help enhance immunity of plants and thus production.

Music and conservation agriculture

Music can create wonders and the researches have proved that music on the agriculture field not only enhances quality, production and productivity but makes the grains healthy. In our traditional agriculture, music vibrations produced through the bells tied in the neck of bullocks and cows induced positive energy in animals and farmers resulting in better production. Women farmers and labourers sing Sohar song while transplanting paddy uprooted from nursery as it is believed that the song vibrations help roots to establish faster and earlier than those planted without song. Singing while planting, weeding, harvesting, threshing, etc has been our ancient tradition giving good results in respect with production, soil fertility and human health.

It is believed that if plants are given music for half an hour daily, faster growth and higher productivity of plants is observed.

Agricultural operations as per movement of moon and crop yield

Crops sown as per movement of the moon show higher production. The moon affects earth's ocean tides and currents which cause weather and climate changes.

The moon goes through two phases, namely Waxing and Wanning moon.

The Waxing moon is ascending period between the New Moon and Full Moon. It is good time to encourage plant growth and proliferation. As a thumb rule, when moon is waxing, plants develop leaves above ground system. Planting leafy crops that grow above ground during this phase is considered best.

Wanning moon happens in descending period. It describes lunar activity between the full moon and new moon. Plant starts shrinking above the ground system. As a



thumb rule, when moon is in wanning, plants develop their root system. Planting of crops that require strong root system or grow below ground level should be done after full moon, in the Wanning phase.

These kinds of technologies are not very practical in current scenario because of lack of trained healers, experts and mental make-up of

farmers, policy makers and authorities, but such low cost methods and non-monetary inputs must be promoted in present and future. This new era is likely to come very soon in a big way. This will not only transform conservation agriculture but also facilitate transformations of farmers.

In order to ensure food security to

all Indians and the world, '5 M' i.e. Microbial organisms, Meditation, Mantras, Music and cultivation as per Moon movement must be practiced by farming communities worldwide.

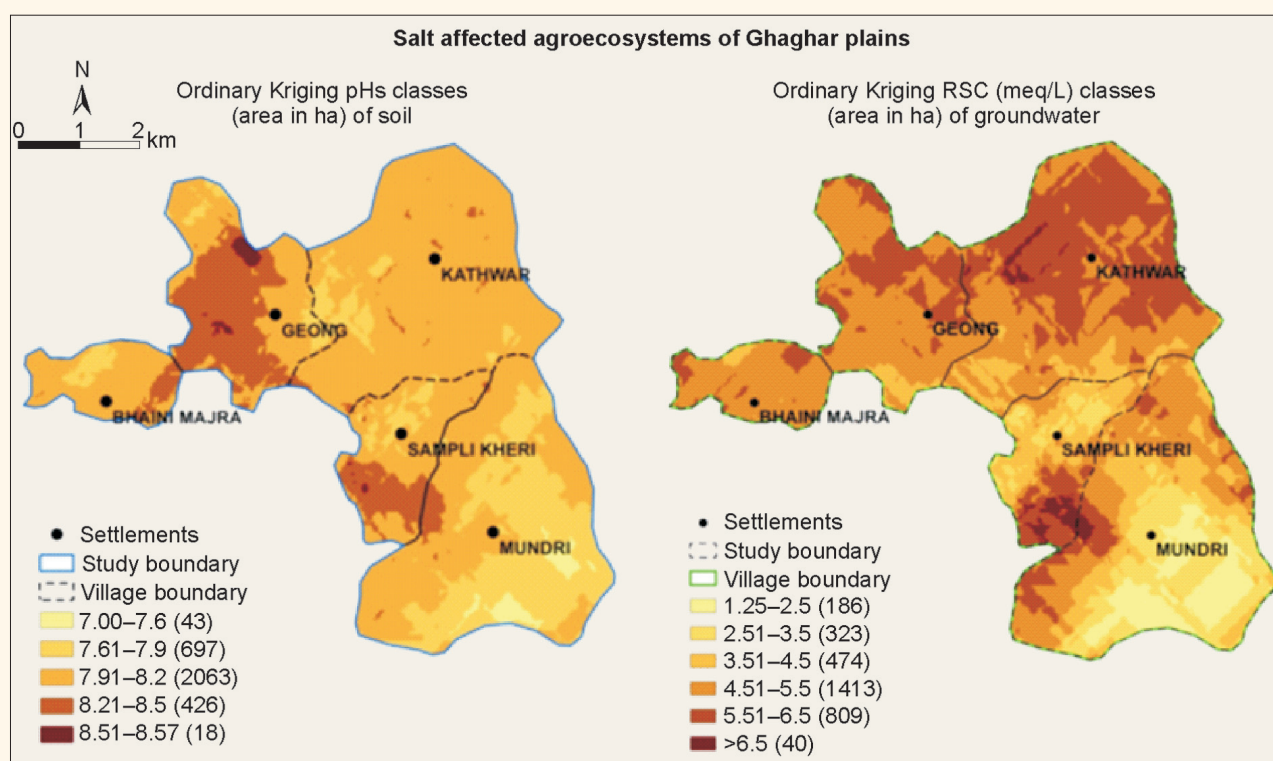
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Success story

Spatial variability assessment of soil and water quality and soil fertility status in salt affected areas

Grid based (0.5 km × 0.5 km) geo-referenced digital stratified thematic maps delineating soil sodicity (soil pH), residual alkalinity (RSC) in irrigation waters, macro (N, P, K, S) and micro (Zn, Fe, Mn, Cu, B) nutrient status in Farmer FIRST adopted villages (Mundri, Kathwar, Geong, Sampli Kheri and Bhaini Majra) of Kaithal, Haryana were prepared.

Out of total 3,247 ha area under adopted villages, only 10.1% area was found with good quality underground water while 90% area was confirmed with residual alkalinity of variable nature. Maximum (62.7%) area is dominated by alkali waters followed by 17.4% marginally alkali and 9.2% highly alkali in nature. Irrigation water salinity is not a major problem in area, with only 0.6% total area salinity (EC>2 dS/m) affected that too with marginal in nature. Majority (43.6%) of the



area is dominated with RSC values ranging between 4.5–5.5 meq/l, being maximum in Bhaini Majra followed by Geong and Kathwar. About 40.1% of total sampled area is affected with sodicity problem having soil pHs>8.2 following the order of Sampli Kheri (54.1%)>Kathwar (40.9%)>Bhaini Majra (40.2%)>Geong (42.6%)>Mundri (33.5%).

Bicarbonate dominated residual alkalinity in irrigation water is the major cause adversely affecting plant growth, soil physico-chemical properties and strongly comprising crop productivity. Precised irrigation water (sodic) management strategies with soil reclamation techniques are the key management issues need to be strongly addressed by holding strong farmers-scientist interface, strengthening farmers participatory research and extension network, suggesting suitable adaptation (salt tolerant varieties) and mitigation (neutralization amendments) strategies to further control degradation (soil sodicity) trends and secure sustainable land management in salt affected agro-ecosystems.

Nitrogen is deficient in whole of arable area while 27.1% area belongs to deficient organic carbon. Phosphorus is in medium to high range while available K status is high. Half of the area is deficient in available zinc. Iron, manganese and copper are in sufficient to high range. B deficiency is prevalent in about 87% of the sampled area.

Source: DARE-ICAR Annual Report 2018-19

