

The social values of organic self farming in Kerala

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Abstract

Kerala is a State which is worst hit by the intake of chemically contaminated vegetables and fruits. The high incidence of cancer deaths in the State has rubbed salt into the wound. The unique socio economic characteristics of Kerala make it heavily dependent on neighbouring States for vegetables/fruits. The situation is exploited by commercial vegetable/fruit growers who deliver products laced with abominable levels of pesticide residues. The article makes an attempt to exhort the urban population to initiate organic gardening and to consume safe home grown vegetables. It is an endeavour to embark on a socio-agro revolution which will lead to self help, self reliance, self sustenance and empowerment.

Keywords: pesticide residues, socio-agro revolution, self help, self sufficiency, self sustenance, empowerment

Introduction

The health conditions of the people in Kerala are found to be severely jeopardized today due to the intake of chemically contaminated vegetables and fruits. The blame squarely rests with the consumer mindset of people; other causes like social, economic and environmental issues should be regarded as secondary. Strangely Kerala now has been reduced to a buyer State, be it in the matter of food materials or other commodities. The high incidence of cancer deaths in the State has rubbed salt into the wound. Notwithstanding the high level of human development index (HDI) in Kerala, why is it that the State has to depend heavily on other States for the day to day use of vegetables and groceries? What has gone wrong with the people of Kerala? Has Kerala become a lucrative market, a dumping yard of hazardous edible materials and fruits/vegetables sprayed with toxic pesticides? Why not Kerala is able to independently produce organic vegetables and fruits required for the people? It looks as though the social conditions are leading inexorably towards a deep crisis. The situation demands a zealous social intervention.

The unique socio economic characteristics of the State's population responsible for largely depending on other States are:

- Decline in the production of food grains
- Absence of large scale vegetable cultivation
- High labour cost
- Preference of the youth to get white collar job or rather reluctance of the youth to involve in blue collar job by virtue of higher educational qualifications
- Unavailability of unskilled labourers
- Change in the prototype of cultivation from food crops to cash crops
- Attitudinal shift in farming for garnering more and more money
- Ignorance about dignity of labour

The outcome of these distinctive circumstances has explicitly generated enormous market potential among the farmers of

nearby States, who have commercially engaged in producing the lion's share of vegetables, fruits and groceries necessary for Kerala. The fact of the matter is that, if for any reason vegetables cease to come to the State from other parts of the country, the people will have nothing to eat! Obviously these are factors which encourage a large number of suppliers to involve in unhealthy and unethical business practices. Quite often unquestionable business lobbies deliver products drenched with noxious chemicals or injected with perilous preservatives. Too weird is to reckon the fact that these business tycoons have no compunction whatsoever in doing so! How to overcome and overpower the challenge has become the thought of the day.

Neither market intervention nor legal banning of chemically contaminated vegetables, fruits and spurious edible products from other States is going to bring any respite to the quandary. Self help, Self reliance, self sustenance and empowerment are the only means and mechanism to beat the problem. The article makes an attempt to exhort the urban population to initiate organic gardening and to consume safe home grown vegetables. Let every urban family produce fresh toxic free vegetables needed for its house hold whereby a novel concept of organic self farming can be demonstrated. Sustainable garden management, be it on terrace or backyard or in front of the house, helps build up the vision of acquiring self sufficiency in vegetable production. But it will get materialized only if Social Workers along with other professionals take the tough task of encouraging and enlightening the masses persuasively.

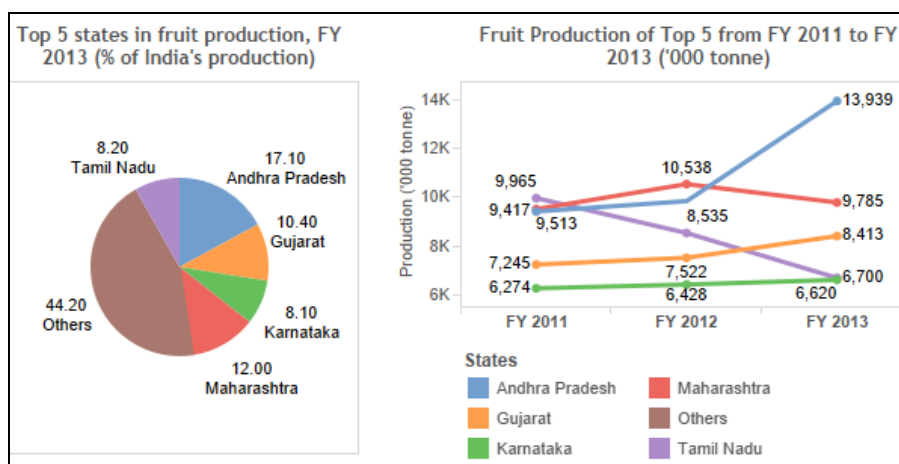
Rating production in terms of consumption

Vegetables constitute the major share of the diet of Malayalee. Justifiable is the domination of vegetables in the staple food since they are abundant with dietary fiber, vitamins, micronutrients, antioxidants and minerals. It would be worth taking note of the recommendation of "Sandeep Sachdeva, Tilak R Sachdev, and Ruchi Sachdeva, 2013"^[8].

“The general recommendation for intake of F AND V (Food and Vegetables) is at least 400 grams per person per day (five serving of 80 g each day) or about 146 kg per person per year. (23,24) Similarly, national nutrition guidelines recommends avg. daily consumption of 300 g for vegetables (portion size = 100 gm × no. of portions = 3) and 100 g of fruits (portion size = 100 gm × no. of portions = 1). The vegetables include (green leafy vegetables = 50 gm, other vegetables = 200 gm, roots and tubers = 50 gm). (25) (2013)”. It is a known fact that Kerala has not been able to produce sufficient vegetables and fruits to meet the aforesaid target. The annual requirement of Kerala is 30 lakh tons of vegetables, but the

State hardly produces 40% of what is needed. (Suchitra, June 19, 2015) [10]. Apparently the deficit is compensated by procurement from neighbouring States. Look at Andhra Pradesh, Tamil Nadu, Karnataka, West Bengal, Bihar, Uttar Pradesh and Gujarat, which have not only become self sufficient but also have excelled in vegetable production outstandingly.

Fig 1 illustrates the percentage and measure of fruit production achieved by those States which were in the forefront in between 2011 and 2013.

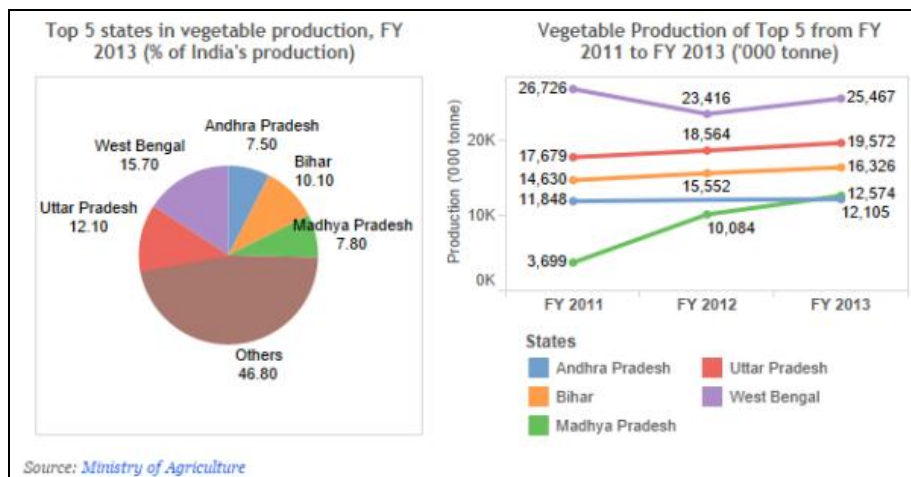


Source: Ministry of Agriculture

Fig 1: Percentage and measure of fruit production

Figure 2 illustrates the percentage and measure of vegetable production achieved by those States which were in the

forefront in between 2011 and 2013.



Source: Ministry of Agriculture

Fig 2: Percentage and measure of vegetable production

S.M. Vanitha, S.N.S. Chaurasia, P.M. Singh and Prakash S. Naik, Indian Institute of Vegetable Research say, “There had been uneven growth of vegetables across the country with wide variations in vegetable productivities in different states. Vegetable productivity ranges for different states.” (2013) [11]. In spite of the poor contribution of Kerala, India produces 146.55 million vegetables, which constitute 14% of world’s vegetable production. Also that our country has reached the level of second largest producer of vegetables. But would it not be a disdainful claim when the question of safety is

raised? Vegetables, fruits, curry leaves and tea produced in other States are often found to be heavily laced with abominable levels of pesticide residues. True that Kerala lags behind other States in terms of quantity of production but it maintains quality which is a matter of great appreciation. Whatever little is produced the vegetable growers of Kerala by and large ensure the supply of fresh farm produce free from agro chemicals. Production is a phenomenon which cannot be rated just in terms of quantity, for quality is also an equal player in the process.

Green revolution has substantially enhanced vegetable production in other parts of our country but clearly not in Kerala. All the same the ecological conditions and agricultural policy of the Government are favourable for large scale organic cultivation. Vegetable and Fruit Promotion Council Keralam (VFPCCK), an organization floated by the Government of Kerala aims to support and promote unsullied vegetable/fruit farming. There has been a resolute effort on the part of the Government and Nature lovers to boost consumption of virgin grown vegetables. Of late Kerala has registered a phenomenal growth in organic vegetable production; so to say for going ahead from just 22% of production in 2012. Nevertheless Kerala has to go a long way to reach self sufficiency.

It deserves mentioning that people are enthusiastically responsive to organic vegetable gardening and sustainable farming techniques. Keralites are all the more aware of the carcinogenic effects of chemically treated vegetables and fruits, but they are defenseless to outdo the predicament due to poor domestic production. The disaster created by spraying endosulfan in cashew plantations in Kasargode, an effort to destroy the tea mosquito bug, is a wake-up call that has aroused the humanitarian ethos of Kerala. The episode has triggered substantial social changes in the minds of people which have sowed the seeds of a new vision – the vision of

farming fresh agro products, free from toxic residues whatsoever. It has marked the beginning of a new kind of socio-agro revolution. This is the right time for social advocacy to empower people for strengthening organic self farming and attaining self sufficiency in respect of vegetables.

What does organic roof gardening mean to urban community?

Dr Viswanath, a protagonist of terrace gardening (2008) [12], says “Terrace gardening is a healthy hobby, not only to keep one engaged for a couple of hours in a week but it gives the pleasure of being in the midst of a growing garden. It gives an opportunity particularly for housewives to take a breath from the routine of running the affairs of house and smiling with flowers and fruits of their own creation.” A big city is something like a concrete jungle where life is deprived of Nature’s embrace. Spending a little while in one’s roof garden, watering, caring and loving the lush green plants gives an opportunity to reach out to pristine environment. It is as much as falling into the lap of Mother Earth and getting a breather from the miseries of life. The experience refreshes and rejuvenates body, mind and intellect. The dense green foliage on the roof top such as the one shown under Fig -3 indeed creates an aura of splendid energy around the house.



Fig 3: Lush green vegetables (Picture by M.K.Mohan)

“Gardening on my terrace garden has helped me live more sustainably because it is not just a cost saver but also a healthier option” says M.K.Mohan, a software professional (2013) [7].

Amaranthus, brinjal, tomato, green chilies, cowpea, lady’s finger, bitter gourd, snake gourd, cucumber, pumpkin, capsicum, coriander, salad cucumber, ash gourd and clove beans are common vegetables found in Kerala, cultivated on roof tops. Even if there is only the bare minimum space left over in the backyard or surroundings of the house, that much area can also be resourcefully used for planting other items like onion, garlic, ginger etc. But if more space is available, curry leaf tree, banana and perennial trees like papaya, drum stick etc can be grown at appropriate places. The natural kitchen waste can be used as excellent organic fertilizer. Dual are the benefits thereby - (1) reduces pollution (2) serves as a good mechanism for solid waste management.

In a bid to popularize vegetable cultivation through terrace as well as homestead, the Agriculture Department of the State Government earmarks a substantial amount every year for implementing a scheme to promote urban clusters. In the current year 2016 – 17 an amount of Rs. 750 lakhs has been allocated for the purpose, out of which Rs. 600 lakhs are allotted for the supply of grow bags for terrace cultivation. The programme is to provide 25 grow bags filled with high quality potting mixture and seedlings of major vegetable crops, 4 to 6 types, to each house-hold in Corporation, Municipality and Panchayat areas. The bags (40 cm X 24 cm X 24 cm size with 600 gauge having 150 micron thickness) worth Rs.2000/- will be supplied to the house-holders at a subsidized rate of Rs.1500/-. (Circular-VC 48742/15, 12/04/2016 issued by the Directorate of Agriculture). Table 1 gives an awareness of the combination of potting media, as made known by the Agriculture Department.

Table 1: Combination of potting media.

a	Red soil	8 Kg
b	Coir pith compost	1.50 Kg
c	Vermicompost/FYM/Other organic manures	300 Gms
d	Bone meal	100 Gms
e	Neem cake	100 Gms
f	Micronutrient	15 Gms

Table - 2 presents district wise targets and fund allocation by the Agriculture Department for achieving the task.

Table 2: District wise targets

S. No.	District	Total No. of units	Total No. of grow bags. 25Nos/Unit	Amount required in lakhs
1	Trivandrum	3200	80000	48
2	Kollam	3200	80000	48
3	Pathanamthitta	3200	80000	48
4	Alappuzha	3200	80000	48
5	Kottayam	3200	80000	48
6	Iduki	1600	40000	24
7	Ernakulam	4800	120000	72
8	Thrissur	3200	80000	48
9	Palakkad	3200	80000	48
10	Malappuram	3200	80000	48
11	Kozhikode	3200	80000	48
12	Wayanad	800	20000	12
13	Kannur	3200	80000	48
14	Kasargod	800	20000	12
	Total	40000	1000000	600

The Kerala Agro Industries Corporation Ltd. (KAIC), a joint venture of the Central Government and the State Government has opened agro super bazaars in Thiruvananthapuram, capital city and other parts of Kerala. It makes available high quality seedlings, gadgets, user friendly agricultural implements, inputs and all materials necessary for any type of farming. The organization’s aim is “All Agricultural Needs Under One Roof”. These agricultural hypermarkets also disseminate modern technical and technological knowhow to the farmers as well as the general public. Even a novice, who knows nothing about gardening will be able to acquire

sufficient knowledge and materials from the said agro super bazaars for stepping into the venture, provided he/she shows interest in farming. The economics underlying the concept of self farming is a very important social matter to be studied. Exorbitant prices of vegetables often tilt family budgets in Kerala. Transportation costs coupled with commercial interests of suppliers pressurize retail vendors to sell the products at overpriced rates. The phenomenon of self farming helps save a substantial amount of money which eases family burden to a large extent.



Fig 4: Fruits of labour, a feast to eyes (veggiegardeningtips.com)

Consumption of fresh vegetables boosts health and caters contentment to the entire family. Organically grown vegetables and fruits as seen in Fig 4, are ever a feast to eyes.

Roof top vegetation often becomes instrumental in strengthening family bonding. Further it generates a remarkable interest in children which is imperative to sustain

a green and salubrious community for tomorrow. A vegetable garden serves as an ideal platform for family members to come together and express solidarity with the sustainable needs of the community. It will send out a loud and clear cue for the cohesiveness of the community; a cue that is capable of educating the community to take up problems like garbage clearance, sanitation, plastic disposal etc for effective and efficient solutions through eco friendly endeavours. Another message disseminated will be a stringent warning to the commercial growers and traders. It will be an admonition that anyone who involves in anti people business will be inviting self destruction.

The people have kicked off the task for purging perilous agro chemicals from the State. Noble will be the mission of Social Workers to take it forward and make it a reality. But in all respects it will be a gargantuan challenge.

Schools and sustainable values of crop production

It is indeed a matter of pride that day by day more and more schools in Kerala are coming forward and dynamically engaging in multiple types of organic vegetable cultivation. The lush green vegetables, Fig -4, the reward of the labour of children, do give an emerald look. Such spectacles are vistas good enough to capture the hearts of people. It looks as though the teachers and students have realized their joint responsibility to meet the vociferous demand of society for a sagacious social change. Self sustenance is the motive of such endeavours. Not only in urban areas but also in rural areas, schools have started cultivating vegetables in a sustainable way. Urban schools, in particular, have demonstrated to other organizations as to why people should turn to organic crop production. Even political parties have taken a cue from the admirable works of these schools and have put in efforts to grow organic vegetables for declaring their commitment and policy in sustainable farming.



Fig 5: An aesthetic icon of gardening (theselfsufficientliving.com)

The Agricultural Department in Kerala wants to mobilize the student community into the field of agriculture by promoting institutional cultivation. 7000 institutions, essentially schools have been identified by the Directorate of Agriculture for providing assistance in 2015 – 2016. “Required seeds will be supplied to them and training will be imparted by the extension functionaries of the Krishi Bhavan concerned. An assistance of Rs. 4000/- will be given to each institution including the cost of seeds and towards the expense for taking

up cultivation.” Says the circular VC 10533/15 issued by the Directorate of Agriculture on 13/05/2015. It is praise worthy that the State Government takes cognizance of the sensitivity of the problem and responds to people’s concerns in the right perspective.

Highly laudable is the initiative of the Avittam Thirunal Government Vocational Higher Secondary School in Alappuzha, to include a course in sustainable agriculture in the curriculum of plus two classes in 2016 with the support of M.S Swaminathan Research Foundation (MSSRF). Such thoughtful steps on the part of schools are not measures which can hardly be confined to sustainable vegetable cultivation just for the sake of the welfare of a small State like Kerala; on the other hand the school’s intention is to accomplish one of the United Nations Sustainable Development Goals (UN SDG), “Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt & reverse land degradation and halt bio-diversity loss”, which should be seen as a quantum leap in environmental education.

Remarkable are the benefits of group farming in school children under the initiative of teachers. They learn the advantages of community farming besides skill development in sustainable crop production and farm entrepreneurship. Look at the outcome of empowerment measures, children achieve from such resourceful social enterprises: Self help, self reliance, self determination, self confidence, wholehearted participation, collectivity, co-operation, co-ordination, cohesiveness and collaborative attitude, which are nothing but treasured attributes of growth, development and social responsibility. As a matter of fact the true spirit of productivity, sustainability and viability is epitomized by schools in a big way today. Children, who are the torch bearers of upcoming social development, do deserve a pat on the back for all their committed work. They take along with them to their homes, practical lessons of natural farming, which motivate their parents and neighbours. Apparently the entire family is inspired to grow as much flowers, fruits and vegetables with a renewed vigour. They explore all possibilities to do the best within the limited parameters of their homes.

The children in fact develop a natural inclination to love Nature and thereby pep up their thoughts and emotions. But one has to understand that the visible change noticed in the mindset of community is only the tip of the iceberg. Social activists and social workers have to sweat over the persuasive output of a small per cent of the population such that sustenance and self sufficiency can be achieved across the length and breadth of Kerala, nay the whole country.

Social worker’s responsibilities to promote production and consumption of self grown safe vegetables

One of the major areas of thrust in modern social work practice is sustainable ways of living, the objectives being health promotion, health protection and fighting climate change. On the question of community health the spotlight basically focuses on food-borne diseases. Social workers, more than any other professionals, can do a lot to strengthen the sustainable life style of people. They can initiate by making a simple beginning; promote production and consumption of safe self grown vegetables in urban communities. Take all possible steps to motivate every family

to get involved in organic vegetable gardening with gusto. The under mentioned steps may be taken up to accomplish the pursuit.

1. Popularize environmental education by jointly working with NGOs and Nature clubs so as to disseminate the necessity of acquiring self sufficiency by every household through sustainable agriculture. Sustainable agriculture is also about vermicomposting, bio diversity, organic waste management, mulching, preparation of herbal pesticides etc. Generate an additional interest in people about such areas of developing natural fertilizers.
2. Effectively campaign for building up sound social capital to support people who take up organic cultivation voluntarily. Social capital is a concept which “relates to the resources available within communities in networks of mutual support, reciprocity, and trust” (Edwards, 2004, p. 5).
3. Work in close liaison with various State Departments of Agriculture, such that people’s apprehensions, problems and doubts are properly and timely addressed. Similarly keep the people informed about the availability of user friendly gadgets, simple agricultural implements, modern know how of terrace cultivation, availability of high quality seeds, seedlings and saplings by transmitting the right details to people from the Agencies concerned.
4. Motivate the leaders of residents’ associations to encourage and enlighten the families living in the respective areas to take up farming activities with a resolve.
5. Make use of social media to the best possible extent to create a favourable mind set in the youth population
6. Let a new *mantra*, “Self sustenance the key to health” become a clarion call to awaken people from deep slumber.
7. Help school children develop a deep affinity with Nature so that they get an inspiration to grow virgin vegetables and fruits for consumption.
8. Arrange as many seminars and workshops in collaboration with the Universities and Colleges to bring out the importance of organic self farming on college campuses.
9. Convince the State Government and National Council of Educational Research and Training (NCERT) through effective social action measures to incorporate practical lessons of organic farming enterprises in school curriculum.
10. Assist Residents’ associations to constitute self help groups (SLGs) of women to chalk out concrete programmes for backing families even financially, to build up a good vegetable garden.
11. Exhort the State Government to declare cash awards, annual or biannual, for the best model of terrace cultivation, which will not only be a great incentive for families but also will enhance their confidence significantly.

Obviously the aforesaid tasks can be executed only if Social Workers join hands with committed community development organizations, particularly NGOs.

Conclusion

Self dependence is the best defense to combat social ills. Even with all resources, a State will not be able to prosper unless and until social development unfolds in the right

perspective. Social development, which rests on productivity, sustainability, equity and viability, is a factor evolving from social empowerment. Social empowerment materializes only by the compliance of the people to adopt creative changes. If so, amazing will be the results. Look at what Albert Einstein has said “Without changing our patterns of thought, we will not be able to solve the problems that we created with our current patterns of thought.”

Terrace cultivation as an individual enterprise and school farming as a collective enterprise are symbolic demonstrations of people which bring out the affirmative changes of the society. But that is not going to serve the purpose out and out. There must be a concerted effort on the part of the Government, social development organizations, political parties and Residents’ associations to bolster up people’s movement in sustainable farming for self sufficiency. In so doing, we will also be able to defeat the mala fide intentions of at least a few business men who are too avaricious to loot the people.

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