

ORGANIC AGRICULTURE IN HIMACHAL PRADESH

VISION, MISSION and STRATEGY

2011

“Himachal Organic Vision, Mission and Strategy”

1. Background to Himachal Organic Vision Mission and Strategy

As part of their subsistent farming operations farmers in Himachal Pradesh have been traditionally dependent on organic ways of farming. Consequently, the farming communities in low hills, valleys and high mountains alike still maintain a rich pool of indigenous technological knowledge of organic agriculture practices. Much of this knowledge pertains to managing scarce resources to improve soil, fertility, soil moisture, irrigation, crop seeds, varieties and about mixed farming to cope with unpredictable climatic conditions. However, institutional interventions focussing on agriculture development for improving food and income security of farmers, encouraged replacement of these organic practices by the inorganic options. Over the past decades, there has been considerable planned thrust on diversification of farming to fruit farming, vegetable farming and floriculture which helped improve food and farm incomes of farming households. It is resulted in success stories of viable farming by small hill farmers on their marginal farmlands, until recent times when farmers, have started experiencing new problems, decline in organic matter of the farmlands, increasing pest incidence of ever new kinds, increasing cost of cultivation, climate change based impacts on agriculture etc.

Under this backdrop, over the past one decade, individual farmers, farmers groups, department of agriculture and the agriculture and horticulture Universities of the State have been engaged in some efforts towards organic agriculture. The impact of efforts of these years by the farmers and institutions/ agencies is reflected in the number of schemes of Department of Agriculture and other line agencies for promoting organic agriculture practices, advocacy programmes on organic farming run by KVKs and organic agriculture research programme started by the Himachal Pradesh Krishi Vishvavidyalya (CSK HPKV). To provide platform to them, the organic farmers of the State have formed the HIMACHAL ORGANIC FARMERS FORUM. It is engaged in organising more and more farmers, discussing their problems and promoting organic agriculture to help solve their farming concerns.

However, Government efforts to promote organic agriculture were so far limited. To help Himachal farmers benefit from full potentials of organic agriculture, the State will have to have a clear vision and a well defined mission with strategies for developing organic agriculture in Himachal Pradesh.

2. Organic Agriculture Perspective and Progress in India

In India, organic farming was started first by the agribusiness entrepreneurs around 2000, supported by the Ministry of Commerce. Initially, organs of the Ministry of Commerce, APEDA, Spices Board and Coffee Board were in a way compelled to promote organic production of export commodities for two reasons, one because of new trade regime of Non Tariff Barriers linked to residue contaminations and unsafe agri-products; and two because of premium prices organic enterprises could enjoy. Indian organic initiative

therefore started with setting up of regulatory mechanism, necessary for exports, rather than on principles of organic.

Further, organic farming meant different meaning to different States in India, indicating that there existed a diversity of State perspectives on organic agriculture, such as;

- *In hill States, namely NE States, Himachal Pradesh and Uttrakhand the concept revolves around managing soil fertility through using low cost organic options for securing sustainable livelihoods. Harnessing organic niches of hilly are also on the agenda of some of the hill States.*
- *To desperate farmers of Maharashtra, MP and Karnataka, it provides them a low cost farming alternative.*
- *For farmers in Kerala, Punjab and Haryana it ensures access to export market and ensure sustainability of the system.*

Now, a new thinking is developing, where by the organic agriculture is being viewed as a precursor to dynamic change, for an otherwise stagnant agriculture sector. There is wide acknowledgement of the fact that the country should promote organic farming for the larger benefit of farming communities and the environment, on the lines of principles of organic agriculture.

3. Some Global Approaches and Experiences to Draw Lessons

During the past decade organic as farming and agribusiness has spread to over 140 countries. Global figures on growth of this sector are astounding. Even though so far it has taken only 1-2% of agricultural sector but its growth is exponential (15-25%). Keeping in view the global growth and the following significant potentials of organic sector, an International Alliance for Organic Agriculture has been set up under the patronage of FAO, IFOAM and CGIAR.

- i. The International Development Agencies consider the potential of the organic sector to contribute to achieving the Millennium Development Goals, one and seven (MDGs; www.un.org/millenniumgoals). The first MDG is the eradication of extreme poverty and hunger. As a production method, organic agriculture is well suited for resource poor and subsistence farmers, as well as for those who are commercially successful. Since organic agriculture advocates lesser dependence on fossil fuel and more on locally available production assets, farmers work with natural processes and increase cost-effectiveness and resilience of their agriculture systems. It helps them break the vicious cycle of indebtedness for agriculture inputs and helps improve soil fertility in sustainable ways.
- ii. The seventh MDG is to ensure environmental sustainability. Organic agriculture is a promising approach to address the issue of environmental degradation; land, water and air, due to agriculture activities. Organic agriculture has potential to contain environmental degradation through improving soil health, enhancing bio-diversity and reducing external energy consumption, in addition to improving farmers incomes. This can, however, make wider impact only if research into organic agriculture helps develop ecologically sound organic production systems which are as productive as the conventional production systems.

- iii. Why countries have been promoting organic agriculture worldwide, presents an interesting picture. Brazil is investing heavily in organic agriculture in the watershed areas for harvesting clean water to urban dwellers. South Korea aims at using organic agriculture to ensure supply of clean water and safe water and safe food to its citizens. Koreans offer incentives to farmers to go organic and farmers are graded and paid incentives annually (US \$ 700/h to US \$ 400/h) as per their contribution to achieve these goals; certified organic, traditional organic, low inputs agriculture, no pesticide farming etc. It is one of the examples of achieving MDG seven. Taiwan has made a paradigm shift in its agriculture strategy calling, "FOOD SAFETY AS IMPORTANT THAN FOOD SECURITY" and it has brought organic sector to the fore for providing its citizens assured quality safe food, imported and / or home grown.
- iv. In Malaysia the organic strategy is guided by the urban consumer demand and substituting imports. In Indonesia, the farmers and Government have a different problem. Chemical Fertilizers are becoming expensive and availability on time unsure because of imports and it is compounded by the fact that land and water degradation is becoming serious concern. Organic farming offers them the way to address these national concerns. Export of organic tea and species from Sri Lanka and rice from Thailand decide their organic strategies, so far. Vietnam and Philippines also see organic as an option to boost agribusiness export.
- v. The organic agriculture strategies of European countries, North America and Japan are based on meeting the increasing consumer demand for organic commodities. Therefore, not only that they have stronger quality assurance mechanisms in place but larger players, namely many agribusiness and food companies are involved in this sector. Contrary to this , several Governments, aid agencies and NGOs view organic agriculture in Africa beyond the trade frame and in these countries there is wider recognition of the potentials of organic agriculture as a pathway to ensure sustainable livelihoods on marginal rain fed lands to poor African farmers. These countries view organic agriculture as a new opportunity for rural development enabling resource poor farmers become food secure.

4. Circumstances in Himachal Pradesh to Promote Organic Agriculture

The farmers and gaming in the State is passing through a phase of several processes and factors including the following, which should attract them, find solutions in the organic agriculture. Some of the key concerns and opportunities of agriculture in Himachal listed below, make a good case for promoting organic agriculture;

- i. Large part of the area of Himachal is under pastures, forests and other kind of wild land, wasteland and support land which is largely used by local farming communities for accessing as grazing land, source of fodder, and wild produce of mushrooms and medicinal plants for local consumption and trade. It is naturally organic area and like Australia and Madhya Pradesh/ Sikkim this area holds potential of being designated as certified organic.

- ii. The sloping or terraced farmlands of the hill farmers inherently are marginal and therefore, supplementing/ improving their organic carbon are an imperative for sustainable agriculture. Presently, farmers have been making use of chemical fertilizers to maximise production on these farmlands. Negative effects of such practices are already visible, such as pulses are no longer grown on these lands, the fields need more and more fertilizers to sustain production, retain less moisture and there is little living soil flora and fauna (so essential for supporting natural ways of maintaining soil fertility). Soils of marginal farmlands already in intensive use for vegetable farming and orchards are showing the fatigue factor, indicated by rising need for more inputs, lesser production and increasing incidence of crop diseases on these croplands. Farmers in vegetable growing areas and apple growers are in a dilemma about available inferior options and moving towards organic practices of soil fertility management is the answer. Thus, improving health of marginal mountain farmlands and valleys lands is the single most important strategic need of organic agriculture in Himachal Pradesh. Inorganic fertilisers are and will never be the sustainable option for maintaining productivity of mountain farmlands, put under mixed farming of food grains, vegetable farming and fruit farming. Further, a healthy soil of the crop land producing healthy crops build resistance capacity of crops to diseases and also makes positive impact on quality of the produce.
- iii. The vegetable farmers and fruit farmers of Himachal Pradesh are presently dependent on increasing use of pesticides, which not only is increasing the cost of production but the quality of produce and food safety both are compromised. Organically grown vegetables and fruits will have better quality; will get better prices (premium prices in case of certified organic). Experience shows that the produce of organic farmers even if uncertified, sells on priority and receives better prices. The shape of ₹1500 crore vegetable business of Himachal can change drastically by adopting organic ways of farming.
- iv. The unwelcome development of cattle abandonment, which has become rampant in Himachal Pradesh, has largely arisen because of the fact that development intervention promoted by the State ignored the inherent multiple values of cattle to hill/ mountain agriculture. The not so appropriate State policy interventions and support services as well as the transforming farm economy to cash crops contributed to the changing the farming perspectives of farmers. Such as, the cow was seen as source of milk only; bullocks were considered drain on farm resources because economic cost calculations of their fodder needs did not match with ploughing costs using mechanical options. It led to their abandonment and now while a crisis of declining crop land fertility builds on the farm lands, the very animal sources which can contain it are abandoned and improving the fertility of roads and wastelands. In this whole transformation process one thing got seriously undermined and that is the value of domestic animals to maintain soil fertility of family farmlands. As an examples, the States never linked, agriculture development programmes with animal husbandry, which shrank to mean and support only dairy farming-meaning milk production

based income. Development interventions faltered in emphasising strengthening of farming linkages between various components.

- v. Today, the cattle issue has become a State problem in Himachal. It is because of undermining the value of cattle to maintaining productivity of hill agriculture, both by the State programmes and by the farmers. Promoting Organic in the State can provide solution to both, converting abandoned cattle into an agribusiness opportunity (the compost enterprises) and enhancing access of farmers to organic compost. Problem of abandoned cattle is serious in low hill areas, namely, Kangra, Hamirpur, Sirmour, Mandi and Bilaspur districts of Himachal, where dairy farming among marginal farming families is prevalent. According to an estimate (Partap) farmers and Goshalas of these areas await and opportunity for the supply of more than ₹ 100 crores compost to apple growing farmers of Shimla, Kinnaur, Kullu and Lahaul and Spiti. The Goshalas and others entrepreneurs can set up small composting enterprises, with both backward linkages to farmers for supply of cattle they wish to abandon and forward linkages again with farmers (vegetable and fruit growers) for supply of compost to them.

It is so far in tapped opportunities, which can become a great farmer to farmer organic input business in Himachal Pradesh, further making value additions to fruit farming economy. It has great promise of becoming a unique success story of promising farming linkages.

- vi. Partially decomposed or raw FYMs with lesser value as compost and more as carriers of diseases and chaff of the field are another key concern of farmers in Himachal. The best example is continuing failures in containing the failure of ginger farming in Sirmour. Agricultural development programmes will do a great job by determining the State of FYMs in different areas and promoting ways to improve it a better compost. For example, the FYMs used presently by the farmers are only partially decomposed and have lesser value as organic fertilizers. Promoting vermin composting and several other similar biological options may be the best option.
- vii. Value addition to cash crops produced by Himachal farmers. Himachal farmers so far benefit from, off season tag to vegetables; niches based crops, such as peas and exotic vegetables grown in higher reaches of the State, the premium quality fruit of cold desert zone (apple of Kinnaur and spiti). The niche value of these commodities will be further enhanced by producing them organically. It is in these areas and for these commodities that certified organic tag or Himachal organic brand will add further value. Only if 20% vegetables and fruit production of the State, largely coming from areas enjoying the location advantage, was to be grown organically, raw estimates are that @20% premium, it will make about ₹80 crores of value addition over 400 crores of the produce. That additional money coming into the pockets of farmers should be enough reason for them to grow organic and for the consumers to pay for safe organic food.
- viii. The expansion of tourism to rural areas by involving villagers in rural home stay is being promoted in the State. There is an opportunity to add value to home stay by broadening its scope as ORGANIC AGRICULTURE TOURISM. Blue print of

organic agricultural tourism is available in the form of organic villages of Uttrakhand and farm tourism in the rural setting between Bombay and Pune. Some NGOs are experimenting with it in Himachal Pradesh in Sangla and Karsog areas too.

- ix. The consumers in small towns and even in rural areas of Himachal are comparatively well off and express the willingness to pay a little more for safe food items, such as fresh vegetables, fruits, milk etc. It is desirable that State takes steps to develop a supply chain mechanism to across its towns for the supply of "Organically grown, chemical free produce". This produce will be uncertified organic and cheaper than certified. It is a general global experience that organic produce of an area is trusted and preferred more by the local people. For example, someone marketing red rice of Chirgaon, Rajmash of Sangla, Mash of Kharal, Wheat and Maize flour of Chamba, Apricot Oil of Kinnaur etc. will have more value and sanctity within Himachal. The organic quality assurance and local brands, varieties bear more trust.

5. Principles of Organic Agriculture as the basis for developing Organic Vision and Mission

Organic agriculture is a unique production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles and soil biological activity, and this is accomplished by using on-farm agronomic, biological and mechanical methods in exclusion of all synthetic off-farm inputs. FAO promotes this understanding and perception about organic agriculture, in its own advocacy and programmes as well as among its member nations. Countries like USA, where organic agriculture, is mainstreamed, acknowledge, ***"Organic farming as a system which avoids or largely excludes the use of synthetic inputs (such as fertilizers, pesticides, hormones, feed additives etc.) and to the maximum extent feasible rely upon crop rotations, crop residues, animal manures, off-farm organic waste, mineral grade rock additives and biological system of nutrient mobilization and plant protection"***.

However, organic is not only about replacing inputs, which is the starting point of the process, it goes beyond, as enshrined in the four principles of organic farming advocated by IFOAM. The principles of organic agriculture, approved by IFOAM in 2005, serve as roots from which organic agriculture grows and develops worldwide. The principles are loaded with a vision to improve agriculture, and apply to agriculture in the broadest sense, including the way people tend soils, water, plants and animals in order to produce, prepare and distribute food and other goods. They concern the way people interact with living landscapes, relate to one another and shape the legacy of future generations. They serve to inspire the organic initiatives, including guiding the development of policies, strategies, programs and standards. Since these principles are composed as ethical principles, it is advised to apply these as a whole.

i. Principle of health: Organic agriculture should sustain and enhance the health of soil, plant, animal, human and planet as one and indivisible.

The principle points out that the health of individuals and communities cannot be separated from the health of the ecosystems-healthy soils produce healthy crops that foster the health of animals and people. Health is the wholeness and integrity of the agriculture systems. It is not only the absence of diseases but the maintenance of physical, biological, social and agro-ecological well being. Immunity, resilience and regeneration capabilities of organic agriculture are the key characteristics of its health. In particular, organic agriculture is intended to produce high quality, nutritious food that contributes to preventive health care and well being. It is in view of this that the use of fertilizers, pesticides, animal drugs and food additives, is prohibited in organic agriculture. While farming organic policies/ strategies and plans the principle of health ensures inclusion of such provision in farming, processing, distribution, or consumption, which lead to sustaining and enhancing the health of overall ecosystems and organisms from the smallest in the soil to human beings.

ii. Principle of ecology: Organic agriculture is based on living ecological systems and cycles, work with them, emulate them and help sustain them.

This principle roots organic agriculture within living ecological systems. It advocates that production has to be based on ecological processes, and recycling. Nourishment and well-being are achieved through the ecology of the specific production environment. For example, in the case of crops it is the living soil; and for animal it is the farm ecosystem. Even if the ecological cycles are universal in nature but their operation is site specific. It is therefore imperative that, **“Organic management must be adapted to local conditions, ecology, culture and scale”**. The principle of ecology emphasises reducing inputs by reuse, recycling, and efficient management, in order to maintain and improve environmental quality and conserve resources. While designing organic policy/ strategies this principle ensures attaining ecological balance through designing appropriate farming systems, establishment of habitats and maintenance of genetic and agricultural diversity. It makes organic farmers, processors, traders and consumers responsible to protect and benefit the environment, including the landscapes, climate, habitats, biodiversity, air and water.

iii. Principle of fairness: Organic agriculture should build on relationships, that ensure fairness with regard to the common environment and life opportunities.

Fairness represents equity, respect, justice and stewardship of the shared world, both among people and in their relationship to other living beings. The principle guides farming of organic pathways/ strategies/ policies/ plans that should ensure fairness at all levels and to all parties; farmers, workers, processors, distributors, traders and consumers as well. The principle further insists that a) animals on organic farms should be provided with the conditions and opportunities of life that accord with their physiology, natural behaviour and well-being; b) natural environmental resources that

are used for production and consumption should be managed in a way that is socially and ecologically just and should be held in trust for future generations; c) it requires that systems of production, distribution and trade are open, equitable and account for real environmental and social costs.

iv. Principle of care: Organic Agriculture should be managed in a in precautionary and responsible manner, to protect the health and well-being of current and future generations, as well as the environment.

It binds organic stakeholders, i.e. farmers, researchers, policy makers and development agencies, to make use of scientific technological knowledge, which ensures that organic agriculture remains healthy, safe and ecologically sound. The principle also promotes using accumulated wisdom and traditional indigenous knowledge of the organic farming communities, may offer valid solutions to organic farmers.

These ethical principle are aimed to inspire developing a holistic vision and

6. Organic Agriculture Vision and Mission of Himachal

6.1 Organic Vision

“the organic vision of Himachal Pradesh is inspired by and inherits the spirit of the national organic vision, so as to make Himachal farmers, consumers and environment benefit from organic agriculture. Its four pillars are as follows;

- i. Organic agriculture becomes low cost sustainable option of farming in the State, particularly for the hill farmers owning rain fed farm lands, helping improve their food and income security.**
- ii. Organic agriculture is mainstreamed in the State and helps achieve ecological and economic sustainability of hill/ mountain agriculture in general i.e. clean water, environment and helps preserve biodiversity.**
- iii. Organic agriculture helps produce and supply adequate safe and nutritious food to the farmers of Himachal and consumers.**
- iv. Organic agriculture leads to becoming an agribusiness opportunity for educated youth of Himachal Pradesh and provides employment opportunities down the supply chain.**

6.2. Himachal Organic Mission-2020

The organic vision of Himachal Pradesh should include goals, which need to be implemented in a mission mode, so as to realise the expected benefits in a defined period of time. The ORGANIC MISSION 2020 of Himachal is to be implemented in a MISSION MODE.

Mile stones of HP Organic Mission 2020;

- i. By 2020 Himachal Pradesh will have aware farmers and public with well organised organic market infrastructure.
- ii. By 2020 Himachal most farmers will be doing organic cultivation on their farm lands. Profitability of small farmers will have increased by reducing input costs. State too will benefited by savings on fertilizers.
- iii. The forests, pasture lands and wastelands of Himachal Pradesh, under the ownership of the Department of Forests, are generally used as grazing lands. The fodder for cattle also comes from these lands. These lands are also habitats of medicinal plants, wild fruits, wild vegetables, and other flora and fauna. Organic Certification of these lands will mean that every product coming from these forests will be certified organic wild harvest. More significant is the facts these lands will then serve as source of certified organic fodder and that will enable farmers maintain organic status of their livestock, namely, cattle, sheep and goat. It is not only necessary step to source the organic milk of buffaloes and cows, organic mutton of sheep and goats but also organic farm yard manure (FYM). Sourcing organic grazing lands and fodder for cattle to produce organic FYM will be very important for those farmers who are willing to obtain certified organic status.
- iv. Mainstreaming organic farming in the State will have reduced the need for subsidies on chemical fertilizers. With over...?? thousand hectares brought under organic agriculture by 2020. It will have saved over ₹..?? crores on subsidies annually on fertilizers and other related inputs. (Formula: 1mh organic save=1,000 crores on subsidies; please note DOA and DOH to calculate figures).
- v. Organic agribusiness become an attractive opportunity to educated youth of the State and creates a variety of job opportunities for other in the organic agribusiness sector, such as on farm and post harvest handling and marketing of the products.
- vi. Himachal develops organic villages for agro tourism, as part of the tourism development strategy of the State. The strategy will help convert organic products into services with high value addition.
- vii. Himachal builds strong institutional capacities and human resources in the State to implement appropriate organic strategies, so as to achieve the mission targets.
- viii. A credible HIMACHAL ORGANIC BRAND is built, under which several organic commodities of Himachal are marketed.

7. Organic Strategy of Himachal Pradesh

(... To achieve goals of the organic mission 2020)

A Strategy with strategies

To accomplish the above organic vision, these is need to devise clear strategies to achieve the goals. The strategies need to built on the factors and processes of the bench mark scenario of organic. It included the State of the existing institutional support, the limitations and the gaps, so as to frame a to-do-list for the State.

7.1 Strategy on organic agriculture policy formulation

“Adoption of promotion of natural resource based organic agriculture keeping soil health, sustainability and productivity as prime focus”. These objectives can be achieved through following activities;

- State Organic Policies and Strategies: As a first step State should formulate organic policies and strategies, giving due consideration to their farming needs, potential niches as strengths for commercial development and threats of not adopting alternatives. Further, the Mission-2020 must strengthen the institutional and human resources capacities of the State, so as to enable it implement various components of the mission, across all agro-ecological zones and production domains.
- Support to Organic Farmers: At present organic farmers of the State do not enjoy a level playing field compared to conventional agriculture farmers, in terms of incentives and subsidies for various farming operations. These farmers need to be supported for their noble contribution.

The ten reasons, why organic farmers need to be compensated for their contributions to the human society in various ways, so identified are;

- i. Organic farming contributes to ecological stability and sustainability of Agriculture provides clean water and maintains clean environment- the strategic needs of the nation. Therefore, organic farmers deserve to be paid direct incentives or compensated on per hectare basis annually. As an example, South Korea has set up the above contributions as national vision for promoting organic in the country and has a unique proactive policy of paying direct incentives to organic farmers, according to their contribution.*
- ii. By going organic farmers save ₹3000 per hectare of inputs costs. Nationally it translates into National saving of ₹30,000 million by converting 10mh of farm land into organic (₹3000x10 million hectares) (Partap 2006). For Himachal by 2020, so many ??/ hectares of organic farming should be saving ₹.... of input costs and...?? subsidy costs to the State.*
- iii. Organic farmers normally help save 100 kg of chemical nutrients (e.g. urea) for which Government pays a hefty subsidy. It is another reason why organic farmers deserve incentives. This amount can be used as the basis for determining the quantum of support to farmers.*
- iv. Much of the ills of hill agriculture today can be linked to exclusion of livestock roles in sustaining agriculture. Organic farming is essentially based on cattle, and therefore to encourage Himachal farmers strengthen this component on their farms, incentives can be provided for integrating livestock component in their farming.*
- v. Since organic farming is essentially legume based and therefore, there is opportunity to formulate/ support schemes/ projects, to encourage farmers grow pulses as rotation crops/ mixed crops/ inter crops/ trap crops. These schemes will also contribute to substantially reducing pulses requirement of the State.*

- vi. *Organic farming inherently involves poly cropping and therefore supports Diversification leading to reduction of threat from insects, pests and diseases and increased biodiversity and micro flora and fauna.*
- vii. *Organic farmers contribute to saving water and developing healthy soils which are rich in organic carbon. These lead to conservation of water, increased recharge and allow an opportunity for carbon sequestration.*
- viii. *Conventional agriculture contributes to emission of green house gases because of the use of nitrogenous fertilizers (IPC report). In this context organic farmers do help in reducing green house gases by not using nitrogenous fertilizers.*
- ix. *By producing safe food organic farmers are contributing to reducing health concerns of our consuming society. Organic food production and consumption will help reduce the health bills of the families and the State.*
- x. *Nationally, subsidies on chemical fertilizers exceed ₹ 1,12,000 crores (2008-2009). Himachal also has its share in it (...??). Therefore organic farmers make significant contribution to reduce the fertilizer subsidy bill of the Government.*

Cautions about Policy Formulation Process

It may be taken as imperative that the State performs an in depth assessment of its agriculture policies, programs and plans, to understand how it affects the competitiveness and the conditions of the organic sector. An action plan for the organic sector should be developed based on analysis of the State of the sector, a needs assessments and proper sequencing. Setting clear targets for the organic sector will help agencies and stakeholders to focus their efforts. Himachal Organic Farmers Forum may be a first welcome step but the private sector, commercial and NGOs in the State should also be encouraged to join forces to form a united organic sector body. Setting up a permanent body, where people from these sectors are represented. It becomes a suitable public platform for the consultations and policy inputs on organic sector development in the State.

Government support to organic sector should be linked to general agriculture policies as much as possible, especially when organic agriculture is being promoted as a mainstream solution. The State Government must recognise and give due consideration to the diverse interests represented in the organic sector and ensure that all of them are considered properly.

7.2 Strategy on Awareness Raising

There is absolute need of mass awareness about the potentials of organic farming to farmers, consumers, civil society as a whole. It calls for supporting different approaches to bring awareness among different sections of the farmers and society. Organic Mission 2020 must support launch of various awareness programmes. Some of the important interventions can be;

- Organising and/ or supporting meetings, conferences, seminars, workshops, national and international trade fairs, exhibitions and organic haats etc.
- Awareness through print and electronic media.
- Publications, books, manuals in different Indian languages in several aspects of organic agriculture need to be encouraged/ supported; namely, popularisation of innovative practices, production and quality control of inputs, region specific management practices etc.

Awareness resign cum Institutional Strengthening

Success of organic sector in the State also depends on the State of line agencies awareness, knowledge and skill capacities to provide technical and other information services to the farmers and public. Well informed staff is a prerequisite to successful implementation of mission programmes. Therefore, as organic sector grows, the people from Government line agencies, scientists, farmers and private sector should continue participating in the relevant national and international events. To name a few such events, India Organic cum Biofach India, International events in organic, such as Biofach, IFOAM conferences, International workshops, symposia and conferences. It increases awareness about latest development in the field and developing market linkages. IFOAM congress, specially, is very useful in understanding the ways international norms on organic are charted and what significance these have for a region.

7.3 Strategy for Strengthening Organic Research

i. Needs Assessment

- Need to invest in building critical cadre of first generation scientific manpower in organic subject and other agencies in organic agriculture.
- Need to setup farmer fields based demonstration cum experimental models comparing organic versus conventional agriculture.
- Need to invest in research on critical issues of technology validation, refinement and innovations in organic agriculture and support SAU and other agencies including NGOs in undertaking these issues based research activities.

ii. Actions

- SAU to focus on research in organic agriculture and State to provide adequate resources
- SAU to launch diploma and certificate course in organic agriculture (in areas of input management, certification and inspection, supply chain management, retail marketing etc.).
- Undertake research in variety of issues (identified) in organic agriculture
- Supporting projects for setting up farmer's field based demonstration cum experimental systems comparison models (comparing organic versus conventional agriculture).

- Projects on documentation, validation and refinement of technologies and practices development by organic farmers and others.
- SAU scientists and DOA to join hands for preparing package of practices- organic crop guides/ organic agricultural systems guides.
- Building a cadre of first generation organic planners, researchers.
- Trainers and extension workers.
- Support long term, medium term and short term projects targeted on scientific validation of organic farming practices, protocols, innovations (FiB1 type experiments).

iii. Identified issues for research programmes

Long, medium and short term research programmes/ projects

- Standardization of technologies of organic farming for different categories of crops, farmers, farming systems, resource bases and agro-ecological zones.
- Selection and breeding of suitable varieties for organic management.
- Development of nutrient management protocols with rotations, nutrient management strategies and on-farm input management with locally available resources.
- Development of organic compliant plant protection measures.
- Identification of suitable crop combinations and crop rotations for particular crop specific farming system.
- Identification of suitable varieties from existing pool for optimum productivity, quality and pest resistance.
- Improvement and enrichment of input production strategies/ methodologies.
- Integration of animal with cropping systems.
- Development of appropriate machines, tools and machine driven/ bullock driven devices for organic farming operations such as liquid manure spreader, mechanical weeding machines for different crops, seed drills for multi-crop sowing and planting etc.
- Development of machines/ devices for conversion of animal energy into mechanical and electrical energy.
- Collection and documentation of successful practices development by practising organic farmers.
- Validation of soil enrichment and plant protection formulations developed by practising organic farmers/ NGOs and institutions.
- Validation of various systems of organic farming (such as natural farming, homa farming, biodynamic farming etc.) for their proper integration into integrated organic farming approaches with best productivity prospects.
- Identification, development and documentation of suitable post harvest management and post harvest storage practices.

7.4 Strategy for Strengthening Organic Extension Services

- Model organic farms of the farmers as training centres: Initial growth of organic agriculture has taken place on the strength of technology development by practicing farmers. These pioneers in organic agriculture are also innovators of organic technologies. Many such farms of the farmers in States of Maharashtra, Karnataka, Tamil Nadu, Himachal Pradesh, Uttar Pradesh and Madhya Pradesh already serve as informal centres of exposure and learning in a farmer to farmer knowledge sharing process. Himachal should make use of these centres of organic learning, facilitating training of the Himachal farmers and line agency staff. However, such farms existing within the State should be supported to develop further to serve both the purpose of testing and demonstration. They are made partners by scientists for testing suitable production protocols, specific to the crops, locations and climates, demonstration and training centres.
- Extension Training Programmes: The training programs for the extension workers should include courses on organic cropping management systems, input production and management, quality assurance systems, post harvest management and value addition etc.
- Creating Cadres of Farmer Trainers: farmers tend to learn easily from farmers, more so for organic systems. Therefore, across State a pool of farmer-trainers will need to be created. These farmer trainers should be given further training on organic agriculture production systems, supply chains, policies etc. in addition to their own knowledge on organic agriculture. In the long run, organic mission 2020 will be best served by these agents of technology dissemination. The farmer trainer approach should be based on PPP mode by involving local practising farmers and local NGOs with full financial support from the mission 2020.
- Further, setting up, ICS based PGS system and also third party organic certification body within the State, some private bodies/ NGOs can be encouraged to take the lead. In this context, APEDA and NCOF both help provide training and in accreditation. Certification agencies can be supported to become good service providers for the export sector.
- There have been success stories about the Government facilitating development of local service provided for Internal Control Systems, input supplies, skill development of farmers in production, following the certification process and other back up support farmers may need.

7.5. Strategy for Quality Assurance Management

(Certification/ Branding/ Credibility building)

- Taking a position on certification and building systems Himachal should aim to mainstream organic agriculture as a sustainable alternative production system approach for the benefit of farmers, and State to reduce burden of subsidies on chemical fertilizers, other inputs, safe food and for clean water and environment. (International experience indicates that to promote organic agriculture as low

cost resource conserving sustainable form of agriculture, it must be promoted without linking it with formal regulations and certification. Certification should therefore, be considered as further value addition for quality assurance, and be maintained as voluntary option).

It is important for the State to avoid compulsory requirements for mandatory third party certification, because it blocks other more suitable alternatives to emerge. Mandatory regulations should only be considered when the need is clearly established. Regulations for local markets must be based on local conditions, and not on the conditions defined for export.

Third Party certification

- Himachal does not have its own State policies and mechanism in place for maintaining standards and trust of certified organic products, but follows the national regulations, in this regard. National Programme on Organic Production being operated under FTDR Act and APGMC Act meet the requirements of quality assurance in organic for both domestic market and export, import. Even though there are 16 certifying agencies across the country but keeping in view the Himachal Organic Mission 2020 Goals, their easy access to organic producers of the State will remain an issue. Therefore, Mission 2020 should include a program on setting up of a certifying agency in the State, preferably by a professional private body, such as CAPA which also has a Retired Agricultural Scientists Forum of Himachal.
- Supporting ICS Management and Certification by the grower group certification system through service providers and data management for thorough traceability. It will be a great step forward if the Mission 2020 supports setting up of State level web hosted data base system to develop repository of organic farmers and organic products of the State.
- Funds setting up of few residual testing laboratories by public or private bodies of under PPP...

Farmer's Participatory Guarantee System (PGS, support of MOA-GOI)

To ensure low cost farmer guaranteed alternative quality assurance system, there is need to promote PGS. It will encourage farmers to understand the benefits of quality assurance and it should encourage them to use it as a precursor to certification by third party. The PGS system is now part of the National Programme on Organic Agriculture promoted by NCOF, Ministry of Agriculture and the State may benefit from this.

It will suit Himachal to promote and adopt the following certification approach;

One, facilitate certification by third party only commodities aimed at export outside State the State (national or export). Two, develop participatory guarantee system

(PGS, now promoted by NCOF, MOA-GOI) of organic certification for commodities being marketed and consumed within the State, such as food grains, vegetables, fruits for within State urban centres. Three, develop a concept of niche branding in case of some farm produce for marketing within State and support supply chains development. For example, identify and market rice of X village, pulses of Y organic village, the vegetable crop of V organic village and like wise. This will help create variety in organic food, which people within State should be able to admire and prefer becoming their regular consumers.

7.6. Strategy for Meeting Organic Inputs Requirement

Production

Under organic management, major emphasis is given to on-farm input management. Therefore, infrastructure needs to be created for effective utilization of all biological waste/ biomass for the best benefit of nutrient recycling.

- For promoting establishment of on farm input production by the farmers, farmers need to be supported for keeping cattle, and making compost, liquid manures, bio fertilizers, bio agents, bio pesticides, application tools, and farm implements etc. The organic mission 2020 must make adequate allocation of resources for supporting such State schemes giving incentives/ subsidies to farmers for the above activities.
- State schemes need to support the development of organic input enterprises and provisions need to be included in the support programmes.
- Financial support may be provided under Organic Farming Mission for setting up of different organic/ biological input production units, under PPP mode. To ensure success, assistance can be provided in the form of back ended subsidy.
- Availability of seed and planting material for promoting organic farming is a constraint. Organic Mission 2020 need to keep provision to fund proposals to address this issue. These programmes may be rub on rural seed system. Farmer owned producer companies can be ideally suited for such support under PPP mode.

Quality Assurance of Inputs

- With the increasing players bringing variety to organic inputs into the market there will be a need for quality control and assurance system. A mechanism needs to be created for assessing the efficacy of such products, define their standards and quality testing protocols.
- The control mechanism set up for the purpose must ensure, that there is an authorized sample collecting agency/ agencies, getting the products in the market tested by accredited laboratories and make the information available to the consumers of the organic products using conventional and modern information communication technologies including Government websites.

7.7. Strategy for Strengthening Organic supply Chains and Marketing Infrastructure

Promotion of organic farming is directly linked with the market development. Therefore, efforts are needed to ensure adequate support to strengthen supply chains. The strategies should therefore include provision for developing or providing financial support to develop dedicated organic supply chain components, namely, grading, cleaning, primary processing units, packing units and storage units with organically compatible fumigation/ protection during storage. Organic Farmers Groups should be encouraged to form producer companies for creating value addition, storage infrastructure development and for direct marketing. Organic Farming Mission may support such dedicated farmer group owned producer companies.

7.8. Governance and Implementation

There may be several options for implementing the Mission 2020 on organic agriculture. It is but prudent to advise that ORGANIC MISSION 2020 be implemented by the Himachal Government under a MISSION MODE APPROACH. That should mean that a nodal agency is set up with a mandate to implement it. The resources be allocated to the nodal agency and the agency further distributes resources on activity basis to different agencies and institutions, farmers groups and NGOs for specific projects. It is an integrated programme, whereby several departments of the Government will be involved, therefore the status and organogram of the nodal agency should be such that it has credibility across departments and is able to implement activities with their involvement.

