



**DEPARTMENT OF HORTICULTURE**

**ARUNACHAL PRADESH**

**Policy Paper/ Write up**

**for**

**State Conclave on Dream Change: Re-shaping the  
Development discourse of Arunachal Pradesh to be held**

**from 8<sup>th</sup> to 9<sup>th</sup> December, 2017**

**On the theme- “Doubling farmers’ income by 2022”**



## HORTICULTURE SECTOR IN ARUNACHAL PRADESH

### ~THE WAY FORWARD~

#### Present status:-

Horticulture sector in Arunachal Pradesh has made considerable progress during the last decade due to consistent effort of the Department and growing awareness among farmers and entrepreneurs. Arunachal Pradesh has attained the distinction of being the largest producer of Kiwi fruit in India with annual production of 9428 MT from 4022 Ha. area, and the second largest producer of Large Cardamom with annual production of 3161 MT from 5873 Ha. area recorded during 2016-17. The state is also the largest producer of Oranges in North East. But much more yet remains to be done to harness the full potential of Horticulture sector in the state. Area, production, and productivity of various horticultural crops, including spices recorded during 2016-17 is as follows:-

#### AREA, PRODUCTION, AND PRODUCTIVITY OF MAJOR HORTICULTURAL CROPS IN ARUNACHAL PRADESH DURING: 2016-17

(A)	FRUIT CROPS:-	Area (Ha.)	Prod. (MT)	Productivity (MT/Ha.)
1.	Apple	6179.38	11665.67	1.89
2.	Kiwi	4022.63	9428.57	2.34
3.	Orange	32850.45	79212.50	2.41
4.	Pineapple	2918.77	22952.23	7.86
5.	Banana	2346.56	14650.96	6.24
6.	Other fruit crops	2878.223	5072.443	1.76
	<b>Sub Total(A):-</b>	<b>51196.01</b>	<b>142982.38</b>	

<b>(B)</b>	<b>SPICES:-</b>			
1.	Large Cardamom	5873.81	3131.41	0.53
2.	Ginger	3838.15	16135.15	4.20
3.	Turmeric	838.69	7556.00	9.01
4.	Other spices	427.65	19564.847	45.75
	<b>Sub Total(B):-</b>	<b>10978.30</b>	<b>46387.41</b>	
<b>(C)</b>	Vegetables	2986.19	21316.68	7.14
<b>(D)</b>	Planation crops (Coconut/Arecanut)	512.00	8364.92	16.34
<b>(E)</b>	Medicinal & Aromatic crops	156.68	872.14	5.57
<b>(F)</b>	Flowers	0.70	2.75	3.93
	<b>GRAND TOTAL:-</b>	<b>65829.88</b>	<b>219926.28</b>	

### **Scope for development of Horticulture sector in Arunachal Pradesh:-**

There is immense scope for development of organic horticulture in Arunachal Pradesh owing to availability of vast unpolluted and fertile land resource and suitable agro-climatic conditions ranging from Alpine-Temperate in higher elevations and Semi-tropical in foothills adjoining the state of Assam. Thus, horticulture is one of the focus sectors in Arunachal Pradesh for socio economic development of the state. Availability of land with a low population density is the greatest strength of the state for Agro-Horti based economic activities of the 18.00 Lakh Ha. area is available for Horticulture activities, only 0.66 Lakh ha. area has been covered under Horticulture plantations, including major spices till 2016-17, which is about 3.66% of the available land. Due to availability of wide range of agro-climatic conditions and unique micro-climate in some pockets of various districts, there is huge scope for cultivation of all types of horticultural crops including spices rare

medicinal plants, high value crops like blue berries, flowers etc. Recommended horticultural crops for various agro-climatic zones are as follows:-

<b>Current focused crops at different horticultural zones</b>	
<b>Horticulture Zone</b>	<b>Major Prioritized Crop</b>
Temperate/ Alpine	<b>Fruits:</b> Apple, Kiwi, Walnut, Pears
	<b>Medicinal Plants:</b> Kutki, Jatamansi, Chirata, Ginseng, Taxus, Aconite, Phodopyllum, Paris , Illicium, Coptisteeta
	<b>Off- season Vegetables:</b> Tomato, Cabbage, Cauliflower, Capsicum, Broccoli
	<b>Commercial Floriculture:</b> Rose (Under protected cultivation)
Sub-Tropical	<b>Fruits:</b> Mandarin Orange, Pineapple, Banana
	<b>Vegetables:</b> Cabbage, Cauliflower, Broccoli, Tomato,
	<b>Spices:</b> Large Cardamom, Ginger, Turmeric
	<b>Medicinal and Aromatic:</b> Patchouli, Stevia, Pipali, Acorus, Citronella and Lemon Grass
	<b>Commercial Floriculture:</b> Rose, Gerbera, Anthurium (Under protected cultivation)
Humid Tropical	Fruits:

	Citrus, Pineapple, Banana
	<b>Vegetables:</b> Cabbage, Cauliflower, Broccoli, Tomato,
	<b>Spices:</b> Ginger, Large Cardamom, Turmeric
	<b>Medicinal and Aromatic:</b> Patchouli, Stevia, Pipali, Acorus, Citronella and Lemon Grass
	<b>Commercial Floriculture:</b> Gerbera, Anthurium (Under protected cultivation)

#### **S.W.O.T ANALYSIS FOR HORTICULTURE SECTOR IN ARUNACHAL PRADESH:**

##### **Strength:**

##### **a. Suitable agro climatic condition:-**

Arunachal Pradesh has a wide range of agro climatic condition, suitable for cultivation of excellent qualities of apple, kiwi, walnut, oranges and other citrus fruits, pineapple, medicinal and aromatic plants, bamboo, mushrooms, spices, flowers etc. The state is a storehouse of highly valued Medicinal Plants, which can propel horticultural activities in the state to newer heights. There are more than 500 species of medicinal plants recorded indigenous and endemic to the state. More than 425 species of Orchids have been reported from Arunachal Pradesh. Numerous varieties of edible mushrooms are available in forests. Many wild relatives of cultivated crops like wild apple, wild kiwi, wild mango, wild bananas, wild citrus, wild mangosteen, wild cherry, wild litchi, wild nuts, wild cardamom and many others are found growing luxuriantly in natural form in the forest which constitutes the rich bio-diversity of the state. This is due to existence of

suitable agro-climatic conditions and unique micro-climate in the state such as Temperate, Tropical, Sub-tropical and humid tropical which spreads across the vast available land of 18 lakhs hectares spreading from foothills bordering Assam to the snow -capped mountains. Hence farmers can grow different types of horticulture crops as per the preference of consumers.

**b. Vast land resource:**

Availability of vast unpolluted and fertile land resource is the greatest strength of the state for agro-horti based economic activity in the state. As per report of the State Land Use Board 18.00 Lakh Ha. area is suitable for horticultural plantations. This coupled with low population density of only 13 persons per Sq. Km., and low fertilizer and pesticide consumption of 3Kg. and 0.006 Kg. per person per annum offers immense scope for commercial organic horticulture in the state.

**c. Adequate Rainfall:**

The state receives well distributed rainfall ranging from 1000-5000 mm per annum which is much higher than many states in the country. Many perennial streams, rivers and rivulets crisscross the mountains and valleys of the state which can be tapped for irrigation purposes in lean periods.

**d. Tradition:-**

Societies in Arunachal Pradesh are traditionally farming community. Farming is a tradition and a family occupation in most cases. Hence, there is no taboo or stigma attached to performing manual labour in farming activities.

**Weakness:**

1. **Communication bottleneck:-** Poor road density and lack of road connectivity to potential areas is one of the major weaknesses hampering further growth and

development of horticulture sector in the state. However, the situation is likely to improve with construction of Trans-Arunachal Highway and construction of rural link roads under PMGSY which will provide connectivity to vast potential areas. Future construction of new roads, particularly rural link roads will have to be planned keeping Agro-Horti activities in the backdrop and not merely to connect populated dwelling areas.

2. **Lack of proper land laws/policy:-** Lack of proper land law/land policy is another weakness hampering the further growth and development of horticulture sector in the state. Farmers are unable to avail many of the centrally sponsored schemes, particularly schemes which involve banking sector due to lack of proper land documents. Framing of a proper land policy/land law will help farmers to avail these centrally sponsored schemes where land document is one of the essential documents. It will also encourage outside investors to take up contract farming and set up agro-based industries in the state.
3. **Lack of awareness among farmers:-** Lack of awareness among farmers regarding recommended standard farming practices lead to low production and productivity. The reason for large scale citrus decline in many districts, and spread of dreaded *Chirke, foorke* viral diseases in Large cardamom can be attributed to this fact.
4. **Shortage of trained manpower in the department:-** There is shortage of trained manpower in the department, particularly in the lower level field workers. The department has not been able to make arrangement for training of field level workers from the level of Horticulture Field Assistants (HFA) and below due to fund constraints which is seriously hampering proper implementation of various developmental schemes due to the field staff's inability to provide timely and correct guidance to farmers on technical and scientific aspects of commercial horticulture farming.

5. **Lack of quality planting materials:-** Planting material is the most important and critical input in any venture in horticulture. At present there is lack of certified quality planting materials, particularly in case of Oranges and Large Cardamom. However, the situation is likely to improve in coming years as funds have been provided under MIDH scheme to several districts for improving the existing nursery and for obtaining nursery accreditation from authorized govt. agencies.
6. **Lack of Research & Development back up and location specific technologies:-** Research & Development is an essential constituent of any successful business venture, and commercial horticulture is no exception. At present there is lack of R&D work in the department. However, with creation of Horticulture R&D wing, and State Horticulture Research & Development Institute, the situation is likely to improve in coming years. The R&D wing has been mandated for development of quality planting materials and location specific technologies for horticultural crops in the state.

#### **OPPORTUNITY:-**

1. **Discourage Shifting(Jhum) cultivation/Opium poppy cultivation by providing viable alternative through Horticulture:-** Horticulture can provide a viable alternative livelihood opportunity to the environmentally devastating practice of *Jhum*(Shifting) cultivation still prevalent in many districts. Most of the Centrally sponsored schemes like MIDH being implemented by the department have water tight guidelines and are often not suitable for taking on the nagging problems like Shifting cultivation or for providing alternative livelihood to opium cultivators prevalent in many districts. Hence, the state Govt. has to come up with its own schemes, missions/ programmes/ projects to tackle such problems by providing suitable fund to the department.

- 2. Promoting Self-employment for educated unemployed youths through horticulture:-**Providing meaningful employment to educated youths is a big challenge not only for the state of Arunachal Pradesh, but for the whole nation. Arunachal Pradesh is churning out hundreds of graduates in various disciplines every year. There are already more than 200 unemployed graduates in Horticulture alone, and many of them have already completed post-graduation and PhD degrees. Horticulture sector can provide self-employment opportunities to educated unemployed youths to a great extent. But for this, the state Govt. has to launch special programmes in line with recently announced Deen Dayal Upadhyaya Swavalmban Yojana, Chief Minister's Krishi Reen Yojana with suitable modifications/ relaxation wherever necessary to suit the requirement of promoting young entrepreneurs.
- 3. Promote agro-horti tourism:-**Horticulture can promote tourism activities in the state. Agro-Horti tourism is already taking place in districts like Lower Subansiri and West Kameng. Tourism department will have to collaborate with farmers and the department of horticulture to include Agro-horti tourism in tourist circuits. And also tour operators in the state will have to be educated on seasonality of crops for inclusion in their tourist itinerary. Farmers themselves will have to be educated for receiving the tourist and to provide essential facilities for convenience of the tourist. Quality improvement of farm produce and providing connectivity to farms will also be essential for promoting Agro-Horti tourism.
- 4. Environment conservation by promoting shade loving crops like Large cardamom:-**Some spices crops like Large Cardamom and certain medicinal plants are cultivated in partial shade condition, and hence, felling of naturally occurring big trees are not required for their cultivation. Thus, horticulture can provide livelihood to farmers and conserve the environment at the same time by promoting cultivation of spice crop like Large Cardamom etc.

**THREAT:-**

- 1. Lack of proper market linkages, marketing infrastructure, and unstable market price for produce:-**Lack of market linkages, marketing infrastructure, postharvest infrastructure and unstable market price for produce are the major threat to further growth of Horticulture sector in the state. However, the department is working on these issues and situation will improve in coming years. But for this, the state Govt. will have to support the department by providing necessary fund to enable the department to address these issues.
- 2. Inadequate funding under state plan programmes:-**The fund provided under normal state plan programmes are just enough for maintenance of existing assets and on-going programmes of the department, and there is no scope for taking up any innovative programme.
- 3. Lack of transportation and mobility of officers and staff:-**Mobility of officers and staff is important for proper implementation of developmental schemes and for providing timely guidance and technical advice to farmers. At present the department is faced with acute shortage of vehicles; both Light vehicles as well as heavy vehicles. Most of the departmental vehicles are more than 15 years old and in off- road condition in most cases. This has affected the monitoring and supervision by the department officers and staff.
- 4. Lack of motivation among officers and field staff:-**There is a visible lack of motivation among officers and staff due to various problems faced by them. Lack of training is one of the major reasons, especially among lower field staff like Horticulture Field Assistants (HFAs) who are actually the first contact of farmers.

Lack of basic facilities like transportation, accommodation, stagnation are reasons for lack of motivation.

### **The way forward and current priorities:-**

#### **Current priorities**

**1. Doubling farmers' income by 2022:-** Keeping the vision of Govt. for doubling farmers' income by 2022, the Department of Horticulture proposes the following steps to be initiated in right earnest.

**a. Special drive on training and awareness programmes for quality**

**improvement of produce:-** Arunachal Pradesh produces huge quantities of surplus in various fruits and spices crops like Orange, Kiwi, Apples, Pineapples, Large Cardamom, Ginger, Turmeric etc. However, farmers are unable to get optimum price for their produce due to lack of quality in produce. This is mainly due to ignorance and lack of awareness among farmers regarding standard recommended farm practices. Hence, the department proposes to conduct a special drive for training of farmers by involving scientists from KVKs/ICAR /CITH/ College of Horticulture, Pasighat, other Horticulture institutions and Private companies. If required, the department also proposes to hire experts/consultants from corporate sector for advising the farmers for maintaining the quality standards of their produce for various markets within the country and outside. The expected financial involvement for the proposed activity would be about Rs.100.00 Lakh. The department proposes to launch the programme from next FY (2018-19) if the Govt. provides the necessary fund and gives go ahead.

**b. To encourage organic farming and to assist farmers in obtaining**

**organic certification:-** Certified organic produce fetch higher price in market. With growing health consciousness all over the world, the demand

for organic produce has grown many folds over the years. Keeping in line with the organic policy notified by the state Govt., the department proposes to encourage organic farming and assist the farmers in obtaining organic certification for their produce. This will ensure higher price for their produce and higher income for farmers. Organic certification will be done by involving authorized certifying agencies to meet the export standards to ensure market and high remuneration for farmers' produce. The department proposes to take up certification programme in 20,000 Ha., 1000 Ha. in each district in 1<sup>st</sup> phase (2018-2020). The expected financial involvement for the proposed activity is Rs. 30.00 Crore. Department of Agriculture is the nodal department for implementation of State Mission organic. However, it is suggested that the Department of Horticulture should be entrusted for taking up organic certification of Horticultural crops for proper coordination with farmers.

- c. To encourage integrated farming with vermicomposting:-**Organic farming will not be possible without integrated farming. Hence farmers will be encouraged to take up integrated farming with cattle rearing, piggery etc. for generating compost for the farm as well as to earn additional income from such activity. Vermicomposting will be made compulsory wherever organic farming is being taken up for replenishing nutrient status of the farm which will lead to higher yield and higher income.
- d. To encourage intercropping with short duration crops:-** Farmers will be encouraged to take up intercropping with short duration crops like vegetables, Medicinal Plants, and other crops wherever possible to augment farm income. Backyard vegetable cultivation will also be encouraged for additional income.

- e. Providing forward and backward market linkages:-**At present, most of horticultural produce are marketed through unscrupulous middlemen from Assam and nearby states, who very often exploit the farmers and pay very low price for produce. Hence, the department proposes to provide forward and backward market linkages through reputed companies to ensure optimum price for farmers' produce. The Department proposes to establish one cold chain in each district leading at least up to Guwahati. Help of marketing organizations, like NERAMAC can be sought for transporting and marketing of produce beyond Guwahati. This will involve purchase of refrigerated vans, providing packaging houses and mini cold storages, providing packing material, fruit trays, washing and grading machines to farmers at subsidized cost. The estimated financial involvement for the proposed activity is 47.00 Crore for providing one 12 Ton refrigerated van in each district and for providing Mini Pack house/Mini cold storage to 100 farmers in each district. The contacts established with various companies and experience during World Food India-2017 will come in handy in planning and implementation of proposed activity.
- f. To encourage value addition and processing:-**The department also proposes to encourage processing and value addition of horticultural crops to maximize farmers' income. Existing fruit processing units at Dirang, West Kameng District and Aalo, West Siang districts will be strengthened and renovated for imparting trainings on fruit preservation techniques to farmers, and also to facilitate the use of available machineries for processing their left over fruits for value addition. Undersized and left over fruits like Apple, Oranges, Pineapples, Kiwi etc. can be converted to Juice, Jam, Jelly, Candy etc. which will fetch additional income for farmers. If required, the department will set up similar fruit processing centers in other districts

also. Interested entrepreneurs will be encouraged to set up fruit and spices processing units by availing subsidies available under Ministry of Food processing, and State Govt. initiatives like DeenDayalUpadhyayaSwavalmban Yojana etc.

- g. Special drive for rejuvenation of old orchards:-** Large scaled decline of orchards, particularly in case of oranges and other citrus fruits have been observed in recent times which has adversely affected the production and productivity of horticultural crops. This is mainly due to ignorance of farmers and lack of timely maintenance works in orchards. Saving the existing orchards which are already in production stages is as important as establishing new orchards. Hence, the Department proposes to launch a special drive for rejuvenation of old orchards, particularly in Orange crop to assist the farmers in rejuvenating their old orchards. Scientists from ICAR, KVKs and Horticulture College, Pasighat will be involved in this programme for recommending best farm practices to prevent decline and also to revive the declining orchards. This will increase the production and productivity of horticultural crops and farmers' income at the same time. The expected financial involvement for the proposed activity is Rs.20.00 Crore.

### **The way forward**

#### **VISION 2022 – TOWARDS A NEW INDIA**

- **Area expansion activity to cover additional area of 10,000 Ha. under various horticultural crops, including non- traditional crops like Blue berries, straw berries, cherries, walnuts etc.**

As pointed out in earlier, vast potential area still exists for development of horticulture in Arunachal Pradesh. Hence, the department of horticulture has set a physical target to cover additional area of 10,000 Ha., with yearly phasing of 2,000 Ha. in each year under various horticultural crops by 2022. The department will also encourage organic cultivation of non-traditional high-value crops like Blue berries, straw berries, cherries, chestnuts, pecan nuts, Persimmon etc. to augment the income of farmers.

- **To increase productivity and farmers' income by providing guidance to farmers through training and awareness programmes to adopt latest technology in farming practices.**

Lack of awareness among farmers is one of the reasons for low productivity in Horticulture. Hence, the department proposes to put in extra efforts for creating awareness among farmers regarding latest technology in farming practices through training and awareness programmes. Efforts will be made to demonstrate the technologies in farmers' fields, instead of class room trainings.

- **Promotion of Good Agricultural practice and organic farming.-**

Goal of Agriculture/ Horticulture farming is not only about earning profits, but also of producing healthy food using the most efficient technology in the most economical manner without causing harm to the natural ecology. With growing health and environment consciousness, concepts of Good Agricultural practices and Organic cultivation have gained popularity all over the world. Hence, the department proposes to encourage good agricultural practices and organic farming through various measures for the benefit of farmers and consumers, and to meet the standard of global markets.

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- **To encourage proper postharvest management and value addition to ensure maximum remuneration to farmers.**

Postharvest losses of horticultural produce are very high in Arunachal Pradesh. It is estimated that the postharvest loss could be as high as 30 to 40%. Some of the factors which contribute to this situation are- Lack of awareness among farmers in handling horticultural produce, poor road communication, lack of proper transportation, lack of value addition facilities. Hence, the department proposes to train the farmers in handling horticulture produce, provide proper packaging material on subsidised cost, and also promote value addition/fruit processing activities among farmers and entrepreneurs. This will help prevent postharvest losses and increase overall income of farmers.

- **To encourage educated youths to take up Horticulture and related activities for self-employment and livelihood through various schemes of the department.**

Unemployment among educated youths is one of the serious and nagging problems being faced by the state Govt. at present. It would not be possible for any Govt. to provide govt. jobs to every educated person nor is it advisable to do so. Real development will happen only with creation of wealth and assets by using the available resources of the state. And this can happen only by encouraging entrepreneurial and business activities. Horticulture and related activities can provide self-employment and livelihood to educated youths and entrepreneurs. Hence, the Department proposes to launch special programmes for encouraging the educated unemployed youths to take up horticulture as self-employment and livelihood generation.

➤ **To provide forward and backward market linkages and establishment of 4 Nos. of cold chain to link farmers to major Mandis, and markets in the country.**

- **Kimin to Guwahati (To cover Papum Pare/Kurung Kumey/KraDaadi/Lower Subansiri/Upper Subansiri**
- **Bhalukpong to Guwahati (To cover Tawang/ West Kameng(Bomdila)/East Kameng**
- **Pasighat to Guwahati (to cover West Siang/Siang/East Siang/Upper Siang**
- **Mahadebpur to Guwahati (To cover Dibang Valley/Lower Dibang Valley/Anjaw /Lohit/Namsai/Changlang/ Tirap/Longding**

Arunachal Pradesh produce huge surplus of various horticulture products like Apples, Kiwi, Oranges, Pineapples, Banana, vegetables etc. But farmers do not get the optimum price for their produce due to lack of proper market linkages. Hence, the department proposes to set up cold chains, as proposed above to link the farmers produce to various markets and mandis across the country. This will also reduce postharvest losses, ensure optimum price of produce, and thus augment the farmer's income.

➤ **Compilation of directory of farmers/producers for connecting farmers to buyers/ Markets/ Mandis across country and for facilitating e-marketing.**

The department proposes to create a directory of producers with all required information for promoting e-marketing and to connect farmers to buyers/markets/mandis across the country. The compilation work of producers' directory has already been initiated and on completion will be uploaded in the website.

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- **Development of quality planting materials of Major horticultural crops- Orange, Banana, Pineapple, Large Cardamom, Kiwi, Black Pepper etc. by R&D wing with physical target of 10.00 Lakh Nos.**

Planting material is the most important and critical input in horticulture. Availability of quality planting in time is crucial for success of any venture in horticulture. Hence, the department proposes to produce 10.00 Lakh Nos. of planting materials of major horticultural crops, like Orange, Banana, Pineapple, Large Cardamom, Kiwi, Black Pepper by reviving the existing Govt. nurseries and R&D wing of the department.

- **Conservation, popularization and development of package of practices for local indigenous fruits, vegetables, and medicinal plants.**

Arunachal Pradesh is home to various indigenous fruits, vegetables, and herbs which have been consumed and used for various purposes by local tribals since time immemorial. With urbanization and growth of population the demand for these local vegetables in local markets have increased tremendously causing over extraction from natural sources and risking extinction. Therefore, the department proposes to promote in-situ conservation and also encourage commercial cultivation by developing package of practices of these indigenous fruits, vegetables, and herbs it is also propose to research and document this indigenous fruits, vegetables and herbs, particularly, the nutrient contents and their other usage.

- **Geographical indication/Registration of economically important indigenous plants.**

The department proposes to initiate Geographical indication registration of various economically important indigenous plants. GI registration for Arunachal Orange has

already been obtained. The R&D wing is working on getting GI registration for other economically important indigenous fruits, vegetables, Medicinal Plants etc.

- **Establishment of Bio-conservation parks for economically important indigenous plants.**
- **Establishment of Plant health clinics centers in each district.**
- **Establishment of infrastructure for a full- fledged R&D Institute.**
- **Framing of guidelines for regulation of nursery and import of plantation materials and plant quarantine measures.**
- **Training and awareness programmes for farmers – 25,000 Nos.**

Times are changing, and technology in farming practices are also changing rapidly. It is essential that farmers are made aware of the latest technology in farming practices for adopting them for their best advantage and to keep pace with the changing times. Hence, the department proposes to launch a special awareness campaign to train at least 25,000 farmers by 2022, with year-wise phasing of 5,000 farmers each year.

- **Training and refresher courses for technical staff, including officers of the department.**
- **Establishment of 2 Nos. of full -fledged training institutes for providing training to field staff and farmers. West Kameng District for Temperate belt, and Siang District for Sub-tropical belt.**

Human resource development is an important aspect for success of any organization, and Govt. departments are no exception. Hence, the department proposes to establish 2 Nos. of full-fledged Horticulture training institutes for conducting regular training programmes for untrained field staff and farmers. At

present the Department does not have any facility for training of its staff or farmers. Technologies in farming sector are changing rapidly. Hence, training and refresher courses for officers and field staff from time to time is of utmost importance to update the knowledge level and to enable the officers and field workers to keep abreast with latest technologies in horticulture industry. The Department proposes to establish two full-fledged training centers in Dirang, West Kameng District for temperate crops and in Jomlo Farm, Siang district for sub-tropical crops to provide certificate level course in Horticulture for untrained Horticulture Field Assistants and lower level field staff. This will include hiring qualified lecturers/ resource persons on contractual basis for development of course curriculum and for imparting trainings. The department also proposes to send technical officers and staff for refreshers courses offered by various institutions like ICAR, Agricultural universities to acquire knowledge regarding latest advancement in the field of horticulture and to transfer the technology to farmers' field through these trained officers and staff.

\*\*\*\*\* *Prosperity through Horticulture* \*\*\*\*\*