Resource Mobilization

I) State Scenario

Geographical area of Maharashtra State is 307 lakh ha. out of which, the net area under agriculture is about 180 lakh ha. i.e. 59 per cent. This proportion at the national level is 43.4%. The ratio of gross irrigated area to gross cropped area at national level is 38.7% while in Maharashtra, is only 16.4%. Thus, 83.6% of the area under Agriculture in the State is directly dependent on monsoon. The State experiences limitations for rich harvests from the cultivated crops due to diversities in Soil, topography and climate leading to lower per hectare productivity and low per capita income than that of national level.

Agriculture is the predominant sector in the State’s economy. About 65% of the total population of State and approximately 60% of its labour population depend directly or indirectly on Agriculture for their livelihood. The share of agriculture in State GDP has depleted from 38% in 1961 to 11.5% in 2000-01. At the national level also, it declined from 52% in 1961 to 21.7% in 2000-2001. It indicates that the share of Agriculture in State GDP is also below the national level. The State’s net domestic product during 1960-61 to 1995-96 registered an annual growth rate of 4.46%, the growth in the real per capita state income has been of the order of 2.11% and that in secondary and tertiary sectors, it was 6.6% and 6.8% respectively, while growth in Agriculture production was only at 1.87%

The average annual growth trend of State income at constant prices (1993-94) during the last 7 years period, from 1993-94 to 2000-2001 was 5.5%. While, the average annual growth rate of per capita state income was 3.4% during the corresponding period. This trend in the growth of State income is not uniform for all the three sectors. The State has recorded the sluggish growth rate of 0.4% in Primary sector, however, the same was 5.6% for secondary sector and 7.2% in tertiary sector in the sectoral composition of State’s income.

The broad sectoral composition of the State income at current prices in 2000-2001 reveals that the share of primary, secondary and tertiary sector was 14.5%, 30% and 55.5% respectively. While during 1993-94, the corresponding share was 21.2%, 31.2% and 47.6% respectively. The sectoral composition of the
State income has undergone considerable changes during 1960-61 to 2000-2001, during this period, the share of primary sector has declined from 34.4% to 14.5% where as the share of secondary and tertiary sector has increased from 25.7% to 30.0% and from 39.9% to 55.5% respectively. This phenomenon reveals that the dependence of State’s economy on agriculture is depleting.

The share of primary, secondary and tertiary sector in the State income at current prices during 2000-2001 was 14.5%, 30.0% and 55.5% respectively. However, the corresponding share of primary, secondary and tertiary sector in National income was 28.4%, 22.2% and 49.4% respectively. This indicates that inspite of declining trends at both State and National level, the share of primary sector is much below the National average.

Capital formation in agriculture as per economic survey of GoI at 1993-94 prices during the year 1993-94 was Rs.13523 crores with public and private share of 33% & 67% respectively. This proportion has changed to 24% with Public sector and 76% with Private sector share respectively during 2000-2001 with total capital formation Rs.16545 crores indicating the shift from public to private sector. Due to this phenomenon and the recent government policies, it is expected that the proportion of private sector for capital formation in Agriculture may rise to more than 90% from the corrent level of 75% during next 25 years.

I) Human Resource:
The State department of Agriculture was established in the year 1888 to promote agricultural development in the State. Earlier the State department was entrusted with the activities of Agril. extension, input supply, research and education. However, during 1969, Agril. Research and education activity was separated and was enthusted to four Agril. Universities located at Rahuri, Dapoli, Akola and Parbhani respectively in Western Maharashtra, Konkan, Vidarbha and Marathwada regions of the State.

Later on due to, specialisation in agricultural development activities, a separate department of Horticulture was created during 1982, Similarly, separate Water Conservation department with soil conservation as one of its wing was also formed during 1993. These three separate directorates continued to work independently till 1998. Subsequently, during 1998 the State department of Agriculture was reorganised on one window pattern with a view to deploy more of its technical staff in the field and provide Agro technical assistance in the filed of Agriculture, Horticulture and Soil Conservation to farmers through single village level worker, merging Horticulture and Soil conservation directorates with Commissioner of Agriculture.

The unified State Department & Agriculture has total 33047 employees which includes 56 % ( ) as technical manpower. This technical skilled manpower is utilised for implementation of various Agricultural Development Programmes of State Government and Government of India, NHB, APEDA and External aided Projects. They are performing the duties related to Agricultural extension, implementing various agricultural development activities including PHM and export promotion in State plan and GoI schemes alongwith actual implementation of Watershed development programmes.
The State has 133 Taluka Seed Farms and 139 Horticultural nurseries with 2567 technical manpower engaged in production of quality seeds and planting material of fruits crops, medicinal and ornamental plants etc. Apart from above activities, available staff is also being utilised for activities of Agro polyclinics for providing some diagnostic services to the farmers in addition to training and demonstrations.

To ensure supply of quality inputs like seeds, fertilisers and pesticides, the department has to undertake regulatory functions with the help of 874 inspectors positioned upto district level. In addition to this, 1513 technical personnel from Zilla parishads are also entrusted the job of quality control. These inspectors exercise quality checks by drawing samples of various inputs from manufacturers, Wholesalers and retail outlets and testing them through State owned 15 quality control laboratories equipped with modern testing equipments and skilled technical manpower.

In addition to this, the State has autonomous seed Certification Agency with 300 technical field Staff to exercise checks for quality seed production during and after crop growth periods till final certification. The work of Phytosanitary certification and residue analysis is also taken up through testing of samples in the State owned residue-testing laboratory located at Pune. Such other facilities are also being created at Nagpur and Nasik. Some private sector laboratories are also providing services to the exports in the State.

The State Department has 29 soil testing labs managed by 668 technical staff all over the State. They also undertake soil survey activities to assess the physical and chemical properties of soils to guide the farmers about soil properties and to ensure judicious use of fertilizers to sustain soil health and fertility. Mobile testing labs from private sector are also providing testing facilities to the farmers in the State. Government also provides some financial assistance to setup small testing labs in private sector.

In addition to above, the State Department of Agriculture has the facility and infrastructure for training of officers and staff in the State at Vasantrao Naik Agril.Extension Management Training Institute, Nagpur at State level and its seven affiliated Regional Agril.Extension Management Training Institutes located at Nagpur, Amravati, Aurangabad Kolhapur, Nasik, Khopoli and Daund, dist.Pune. These institutes are conducting regular training courses with the help of 123 staff members for technical staff of department on technical and management aspects. Vasantdada Sugar Institute located at Manjari near Pune is established to undertake research and training activities in sugarcane, while WALMI at Aurangabad conducts trainings in irrigation management. In addition to Agril. Universities with 2132 technical personnel engaged in Education, Research and Training activities, the State has Yeshwantrao Chavan Open University under private sector which also run various degree and diploma courses through distant education. MACS, Pune, BAIF, WOTR etc. are some of the NGOs working for project implementation and human resource development in rural areas of the State.
Apart from above institutions, the State of Maharashtra has MCAER as a coordinating apex institute for coordinating the research, education and Extension education activities in the State. Four Agricultural Universities in the State run various degree and diploma courses through 35 colleges and 222 Agril. Schools and allied diploma institutes with an annual admission capacity of 2880 and 13320 students respectively. Besides this, the research work on various crops and related issues is being undertaken at 81 Research stations and centres spread over the State.

The State also have five National Research Centres located each at Pune for grapes, Rajgurunagar for onion and garlic and three viz. Cotton, Citrus, biofertilizers at Nagpur. Besides this, NBSS and LUP, NRSA, CTRL, NHRDF, NCL, CFTRI, Agmark etc. are also working as Govt. of India institutes in the State. The State has 25 K.V.Ks. sanctioned by GOI and 112 Agro poly-clinics to undertake the activities of farmer’s training, technology dissemination and technology validation through field trials, demonstrations and farmer’s field trials.

Maharashtra State Agril.Marketing Board is also an apex marketing institute which runs training courses on Agril.Marketing, processing and PHM apart from facilitating coordination of various activities of Agri. produce market committees in the State. They also organise farmers' training to create awareness about the market system and various provisions under the market committee act. The State has 202 registered Co-Op. and 13 private sugar factories with daily crushing capacity of 4.98 lac MT/day of which utilised capacity is 2.91 lakh M.T./day with average recovery of 11.6%. These factories have their cane development wing with technical manpower upto field level to undertake extension, training and input supply activities under their jurisdiction. Apart from this, 45 Fertilizer ,225 Seeds and 130 Pesticides, Manufacturers and 30101 Agro input dealers, crop/commodity organisations like Mahagrapes, Mahamango, Mahabanana, Maha pomegranate, NGOs and progressive farmers are also engaged in input supply and agri extension in their respective fields of interests.

Huge number of technical personnel at various levels are available with the above mentioned institutes in the State which needs to be properly retooled and oriented in recent agro-technological developments. To achieve this, a proper planning of a detailed annual capacity building programme as per pre-identified training needs with the help of State, National and International Institutes needs to be worked out.

A competent core group also needs to be established to discuss, deliberate and guide the State as well as the Stake holders on issues relating to WTO and liberalised economic policies. This will enable and facilitate the State Govt. to create awareness about the issues concerning the competitiveness in export and also the decision making in imports of agricultural goods at Government level.
The group has identified some of the **issues** related development of human resources both under public and private sector which are given below -

- Scattered training infrastructure for capacity building without proper linkage and authority.
- Inadequate orientation / skill upgradation programmes for available human resource.
- Lack of entrepreneurship development content in course curriculum of public sector Agri. Educational Institutes.
- Inadequate availability of trained & skilled manpower and faculty for Human Resource Development in the upcoming areas like Biotechnology, IT, Genetic Engineering etc. both under public and private sector.
- Available manpower equipped with traditional managerial schemes particularly input management, quality control, agro processing and agro marketing etc.
- Very poor awareness about agriculture, ecological system and conservation, regeneration of natural resources among the rural youth.

II) **Institutional Resources**

The reorganised State Department of Agriculture has its State headquarter at Pune with 8 regional offices, 31 district offices, 90 sub divisional offices, 319 taluka and 910 circle offices for implementation of various agricultural development programmes. They also implement watershed development programmes, promote judicious use of irrigation water and guide farmers about post harvest management, hi tech agriculture, agricultural export and agro processing. Besides this the State has 133 Taluka Seed Farms, 139 Horticultural Nurseries, 112 Agro poly clinics, 15 quality control laboratories, 29 soil testing labs, 8 bio control labs, 8 training institutes dispersed all over the State and one fruit processing training center at Aurangabad. These institutes engaged in production of quality seed and planting material, dissemination of latest technologies, quality testing of agro inputs, soil testing and soil survey, production of bio agents, testing of pesticide residue and human resource development activities.

Apart from above institutions the State of Maharashtra has MCAER as apex institute for co-ordinating research, education and extension education activities in the field of agriculture. Four Agricultural Universities located at Rahuri, Parbhani, Akola and Dapoli respectively for western Maharashtra, Marathwada, Vidarbha and Konkan region of the State undertake agricultural research and education activities through 81 agricultural research stations and 15 collages and 222 agricultural schools under public and private sector.

State has also five national research centers located one each at Pune for grapes, Rajgurunagar for onion and garlic and three viz. cotton, citrus and bio fertilizers at Nagpur. Besides this NBSS & LUP, NRSA, CTRL, NHRDF, NCL, CFTRI, Agmark etc. are also working as GoI institutes in the State. Activities like farmers training, technology dissemination and validation through field trails, demonstrations and adaptive trails are being organised through 25 KVKs sanctioned by Govt. of India in the State.
Maharashtra State Agricultural Marketing Board is also an apex marketing institute operate through 274 regulated market yards, 591 sub market yards and 2700 village markets including adivasi bazars with annual market arrivals of about 92.50 lakh M.T. agricultural produced. It has 5433 godowns in main markets and 699 in sub markets.

Boards like KVIB and CSB are also involved to promote the agricultural allied activities viz. apiculture and sericulture in the State.

The State Government has public sector institutes like MSSC, MAIDC, MAFCO, MARKFED, VCMS, and MAHAFED for production, manufacturing, procurement and supply of various agro inputs viz. seeds, fertilizers, pesticides etc. Besides this, Gol institutes viz. NSC, NAFED and NHRDF are also operating in the state for production and supply of seeds, procurement of agricultural produce and research activities in vegetables respectively. NHB and APEDA are also involved in development of post harvest management and export activities of various agro produce in the State.

The State has very strong co-operative institutional network spread throughout the State. The district central co-op banks operate through 3804 branches and 22014 primary agril. Credit societies to provide finance for various agricultural and allied activities in the State. RRBs, State Co-operative Bank, NCDC, MCDC, NABARD, MSCARD Banks etc. are also providing credit for agril. and rural development in the State.

Huge institutional network also exists in private sector for production, supply procurement and processing of various agricultural and agro based productions in the State. The State has 45 fertilizer manufactures, 225 seed companies and 130 pesticide manufactures 2607 and 23153 retail outlets respectively. For judicious use of valuable input like irrigation water, 31 & 28 drip and sprinkler manufacturer respectively are operating in the State through their dealers network on massive scale. Production of saplings of various horticultural crops is undertaken through 1461 private registered nurseries.

The State has very vibrant farmers organisations like Grape Growers Organisation, MAHAGRAPE, MAHABANANA, MAHAMANGO, MAHA POMEGRANATE etc. working for furthering the cause of marketing, supply of critical inputs, processing and post harvest management to fetch more monetary returns. In addition, some Farmers interest groups, NGOs and Self help groups are also playing a vital role for development of agril.and allied activities in various pockets of the State.

Department of Agriculture has facility and infrastructure for training of officers in the State at VANAMATI, Nagpur at State level with its seven affiliated regional agricultural extension management training institutes, located at Nagpur, Amravati, Aurangabad, Kolhapur, Nasik, Khopoli and Daund in Pune district which are conducting training courses for upgrading technical communication and managerial skills regularly. VSI is located at Manjari near Pune is established to undertake research and training activities in sugarcane, while WALMI at
Aurangabad conducts training in land and irrigation water management. In addition to four Agricultural Universities the State has Yeshvantrao Chavan Open University run various degree and diploma courses through distance education MACS at Pune undertake research on soyabean, wheat and grape. YASHADA is state level training institute located at Pune is working for developmental administration for various departments staff and Non official members in three tier system of Panchayat Raj.

Maharashtra State Agril. Marketing Board has also established post harvest management training institute at Pune for training entrepreneurs and staff of the concerned department. Similarly MCED (Maharashtra Centre for Entrepreneurship Development) located at Aurangabad is also organising various training programme for development of the entrepreneurs in the State.

Some private Organisations like manufactures, associations, corporate business houses are also engaged in activities like technology dissemination, providing input testing and diagnostic services and consultancy services to small entrepreneurs.

The group has noticed some lacunae and deficiencies in utilising the available institutional resource to its full capacity which are brought out as issues which are mentioned below.

- Large no. of processing units under NPA Category due to poor management and lack of entrepreneurship skills.
- Less response from the financial institutions to provide appropriate financial rehabilitation package to sick NPA units.
- Failure of Hi-tech Projects in Horticulture and Mushroom sector due to initial high cost, unexperienced management and very wide market fluctuations.
- Inadequate institutional infrastructure for R & D activities under upcoming areas like bio technology, information technology, genetic engineering etc.
- Inadequacy of institutional infrastructure for capacity building of existing manpower and creation of additional speed manpower in specific up coming areas like bio-technology, genetic engineering, Hi-tech agriculture, exports etc.
- Lack of skilled managerial manpower and upgradation of skills of existing manpower in farmers organizations, Co-op. Industry in rural areas etc.
- Lack of information support in marketing the agricultural produce.

III) Infrastructural Resources

Various infrastructures in the field of technology dissemination, capacity building, production of quality seeds and saplings of horticultural plants, production and supply of various agro inputs like seeds, pesticides, fertilizers, bio-fertilizers, bio-pesticides, vermi compost, manufacturing of various improved agricultural
implements, drip and sprinklers sets, storage, grading, packing, and marketing of agro produce are available in the state with public and private sector.

The public sector infrastructure available with the state government is as under

The state government has 133 Taluka Seed Farms, and 139 Horticultural Nurseries for production of quality seeds and sampling of various fruit plants.

In addition to available infrastructure for production of seeds and grafts. Hence these institutes have farmers’s Training infrastructure these centers are being converted into agro polyclinics to undertake training of farmers, organizing demonstrations for technology dissemination, undertake activities like vermi compost, production of bio-agents and providing diagnostic services like testing of soil and water and identification of pests and diseases of the field crops. The state government has principally agreed to establish agro polyclinics in each taluka. The government is also thinking to establish these agro polyclinic through private initiatives in the taluka where government infrastructure is not available. This would be a welcome step for attracting private participation in technology dissemination efforts.

MSSC is a leading seed corporation in the country which supply almost 60% of the certified and quality seeds to the farmers in the state. They produce and supply sufficient quantities of certified and quality seeds of major cereals, pulses, oilseeds, and cotton crops in the state. It has 303 technical staff with 30 seed processing plants spread throughout the state. The corporation has organized seed production programme in 7500 villages on the farms of 37000 seed growers during 2001-2002.

MAIDC Ltd., is another public sector corporation engaged in manufacturing of NPK fertilizers, manufacturing of cattle/poultry feeds, pesticides, formulation, agro engineering and food processing. It has two food processing units, six NPK fertilizer manufacturing units, two cattle and poultry field manufacturing units and two pesticides formulation plants in the state. It has one agro engineering workshop for research and development activity in the field of agricultural implements. They have 16 offices in the state and operate through widespread dealers network.

The state department has 15 quality control laboratories to undertake analysis of samples of seeds, fertilizers and pesticides drawn by the quality control inspectors. Due to massive propagation of integrated pest management technology, the state government has established eight bio-control laboratories under public sector, for production of bio agents like HNVV, HNPV, Trichogramma, and Trichodermma etc.

MAFCO is public sector enterprise which has infrastructure for processing and preservation of vegetables and meat products.

The state government has 29 soil testing laboratories for testing of soil samples. Micro nutrients testing facility is also established in some of these laboratories to guide farmers for proper use of fertilizers and micro nutrients.
Maharashtra has strong industrial base but the share of agro based industries is comparatively low in the total industrial sector. However, in cooperative sector the state has 797 independent processing societies which includes 202 sugar factories, 289 cotton ginning and pressing factories, 91 rice mills and 22 oil mills.

In order to regulate the functioning of Agriculture Produce Market Committees in the state, the Maharashtra State Agriculture Marketing Board has been established. It operates through 274 regular market yards, 591 sub market yards and 2700 village markets including Adivasi Bazars. They have 5433 godowns in main markets and 699 godowns in sub markets for storage of agricultural produce in the market yards. In addition to this 1115 cooperative marketing societies are operating in the state.

The Maharashtra State Cooperative Marketing Federation and the Maharashtra State Co-operative Cotton Growers Marketing Federation have adequate infrastructure for procurement, storage and supply of agriculture produce and procurement and processing of cotton in the State. However, the State should foster fair competition for proper price realization for agriculture produce.

The farmers commodity organisation and some farmers societies/groups are engaged in agri-processing and agri business which have some infrastructure for above activities. It is therefore, proposed to provide common infrastructure particularly in the field of post harvest management, agro processing and export by establishing AEZ & food purls etc.

The private sector in the State is very active and is playing major role in manufacturer & supply of fertilizers and pesticides. Other agro inputs viz. Drip & sprinkler & agricultural implements etc. Most of the hitech agriculture enterprises are established through private sector. Some of them are also exporting their produce. The private sector is also coming up in a big way for production of bio-fertilizers, organic manure (Vermi Compost) and bio-pesticides to promote the concept of organic farming, INM and IPM in the State.

The state government has four agricultural universities, 35 colleges, 222 agricultural school and 81 agricultural research station to undertake agriculture research, education and human resource development activities. They have adequate infrastructure of above activities. However they lack in ultra modern infrastructure required for research and development activities under upcoming area like bio-technology, information technology, hitech agriculture, genetic engineering etc.

It is therefore proposed that the government should effect some relaxations in policy reform through simplified procedures and provide more assistance for attracting private sector investment in agriculture research and educational activities.

The growth has noticed some lacunae and deficiencies in utilizing the infrastructural resources to its full capacity which are brought out as issues as mentioned below
Existing infrastructure is not being used up to its installed capacity.

Mismatch of the available infrastructure with captive and potential areas.

Inadequate infrastructure to meet the requirements of Agro Industries, Agril. Enterprises, Hi-tech Agriculture, Agril. Marketing, PHM and Agril. Export etc

Lack of modern infrastructure in Agril. Education sector to full-fill obligations under WTO upcoming disciplines like Bio - Technology, IT in Agril. and Hi-tech Agriculture, Genetic Engineering etc

Low level of Private sector participation in agril. education supporting infrastructure.

Poor participation of private sector for investment in agro processing, PHM and other related infrastructure development projects.

**Recommendations**

The sub group after due deliberations and going into the details of status and issues related to mobilization of resources have made following recommendations

**I) Human Resource**

- Draw out a mutually agreed capacity building plan for human resource development in public and private sector.

- Induction of compulsory Agril. Subjects in course curriculam of middle school education to create awareness and develop liking for agriculture, conservation, enhancement for fragiles, ecological system and conservation as well as regeneration of natural resources.

- Opening of Agril.Education and Research & Development activities for private sector to generate more skilled agri based human resource.

- Draw out a plan for capacity building in managerial skills of existing manpower in input management, Quality control, Agro processing and Agro marketing from public & private sector.

- Motivation of farmers organization for skill upgradation of their managerial manpower to meet future challenges in Agri. processing, Agril. business and export.
II Institutional Resources

✔ Govt. accreditation to Private institutes for effective capacity utilization and create conducive atmosphere for private investment.

✔ Attract Private sector investment in contract Research through joint venture with public institutions.

✔ Integrated effort to utilize the infrastructure in public as well as in private sector for meeting the Agro technological requirements of Farmers, Research, Extension workers, Agri. Business and Export houses in private sector on mutually agreed terms and conditions.

✔ Formation of core group in the form of a institute with representation from public and private sector to discuss, deliberate, guide and motivate the stakeholders in development of Agriculture in the State through periodical review.

✔ Creating a separate cells under Commissioner of Agriculture to promote subject like Agro Meterology, Agri business, Agriculture export, and WTO related issues in Agriculture.

✔ Strengthening MCAER on the lines of ICAR to coordinate research and education activities in all four Agril. Universities to avoid duplication and multiplicity of scheme & projects and to effect coordination between SAUs and Government Departments.

✔ Assistance for installation of Agril. information centres in rural areas with necessary technical and managerial backup through training of entrepreneurs.

III) Infrastructure Resources

✔ Providing more support to Agri polyclinics for creating modern and latest infrastructure with skilled manpower for technology dissemination, providing consultancy & diagnostic services.

✔ Utilize agro industrial infrastructure for more efficient use through joint venture with Private sector.

✔ Integrated effort to utilize the infrastructure in public as well as in private sector for meeting the Agro technological requirements of Farmers, Research, Extension workers, Agri. Business and Export houses in private sector on mutually agreed terms and conditions.

✔ Encourage project based research in upcoming high tech agril. areas through joint venture with private sector.

✔ Create additional infrastructure in public and private sector institutes to increase their intake capacity to provide additional skilled man power in specific upcoming areas.
IV) Financial Resources

a) Financial Resources in Public Sector

- Proportionate Budget allocation for agriculture sector as that of its share in State's GDP

- Issue of kissan credit cards to all farmers to avail facility of annual credit and recovery, instead of seasonal operation.

- More funds to be made available for agro processing industries other than sugar factories and cotton ginning and pressing factories, like alcohol, ethanol, processed products, post harvest handling and grading etc.

- Provide more funds for promotion of agri business and agro processing as well as agri export through NHB and APEDA schemes.

- Special and additional incentives like tax-benefit, enhanced moratorium period etc. Avoid multiplicity of taxes, subsidized power and water supply etc. to the food processing sector.

- Projectised and increased financial assistance to the FIG's/FOs in rural areas to take up PHM, agri. Marketing, agri business activities, ensuing food security livelihood, projects and the projects on conservation of agro diversity at their own or through their federation. Special benefits through schemes for community projects like Food Park, Agro-Horti Estates, Community Markets (Rayatu Bazar) etc.

- Providing more support to Agri polyclinics for creating modern and latest infrastructure with skilled manpower for technology dissemination, providing consultancy & diagnostic services.

- Submit proposals for financial support from world bank to extension project in lines of NATP to make it applicable throughout the State. In addition to new projects in areas like, rural self-employment, intensification of Agril. and diversification project, saline land reclamation, Hi-tech Agril. projects including Horticulture development, Agril. Marketing, I.T. application in Agriculture, Agro Processing, Watershed development, Promoting organic farming, use of Biotechnology in Agriculture and other environment friendly.

- More funds should be made available from public sector for research in agriculture.

- Agro based projects for promotion of concepts like IPM, INM and IRM etc.
b) Financial resources in Private Sector-

- Utilize agro industrial infrastructure for more efficient use through joint venture with Private sector.
- Govt. accreditation to Private institutes for effective capacity utilization and create conducive atmosphere for private investment.
- Policy reforms in existing land ceiling laws to attract more investment from private sector in Agro processing and export through contract farming which protects the interest of resource poor and marginalised section of rural population.
- Promote self-certification concept to attract investment and incalculate more accountability in Agro inputs and Agro processing sector.
- Privatization of certain areas like marketing, Agri processing and export where Govt. has to act as facilitator and co-ordinator.
- Create investor friendly atmosphere for ensuing more private sector investments in upcoming sectors like Biotechnology, I.T., High tech Agril. and some specialized field in Agril. Sector.
- Attract Private sector investment in contract Research through joint venture with public institutions.
- Ensure involvement of NGO sector like BAIF, WOTR, etc as a source of capacity building, Bio-diversity fund as well as field gene fund as additional source of funding.

Policy reforms

The State should foster fair competition for proper price realisation for agriculture produce. The final aim should be towards an Indian common market by removing all restriction on inter State transport of Agriculture produce.

- Public sector presence in the market to act as an intervener to balance the market prices.
- Policy reform in existing land ceiling laws to attract more investment from private sector in exports and agro processing venture, watershed development resource conservation and only that kind of contract farming which protects the interest of resource poor and marginalised sections of rural population.
- Make provision for contract farming or group farming in the existing land ceiling act.
- Relaxing existing Agro produce marketing laws to promote direct marketing concept of Agro produce on the line of "Raitu Bazar"
III) Financial Resources:

Finance being an important resource in Agricultural production, ensuring its adequate and timely availability would be of much help to increase agricultural production and thereby ensuring more remunerative returns to the farming community.

Sources

At present, finance for development of agriculture sector is available both through public and private sector sources mostly in an isolated manner. Public sector finance is available mainly through Government schemes both from State and Central Govt., Maharashtra State Co.op Bank, Maharashtra State Coop.Agril. and Rural Development Bank & District Central Co.op. Bank, NABARD etc., Boards like NHB, APEDA, Spices Board, Coconut Board, MSAMB and Corporations like NCDC, MCDC, MSSC, MAIDC, MAFCO, MARKFED, MAHAFED, NAFED etc. External sources like World Bank, GTZ, FAO, EEC etc., whereas from private sector, the same is being made available through Nationalized and Commercial banks, Farmers and Commodity Organization’s, SHGs, Money lenders, Traders, Input Dealers, Middlemen and through farmer’s own resources.

State Plan Funds:

The schematic finance available through plan schemes during last three years was to the tune of Rs. 193.78 crores, Rs. 240.21 crores and Rs. 206.94 crores respectively. During Third plan period the provision for agriculture and allied services was 30.8% which has reduced to 4.9% during ninth plan. Provision made in Zilla Parishad budget for Agriculture was approximately 1% which is very meager. This indicates that the plan provision for agriculture and allied services in the State budget is showing a sharp declining trend.

List of various schemes is given as Annexure I.

Employment Guarantee Scheme (EGS)

Among the financial resources available from State Government funds, employment guarantee scheme also provides quite a big sum to undertake programmes like watershed development and horticultural plantation. Funds made available through EGS during last three years are shown below.

(Rs. In lakh)

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Programs</th>
<th>Expenditure under EGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Watershed Development</td>
<td>3017.90</td>
</tr>
<tr>
<td>2</td>
<td>Horticulture Development</td>
<td>7481.72</td>
</tr>
</tbody>
</table>

Looking to the utility of the works executed through EGS funds, it is proposed that more that 50% of the total financial provision for EGS should be made available to above programmes in order to achieve significant and visual results.
Since major portion of the funds under EGS is provided for creation and development of assets in rural areas, more funds can be made available if the community groups are involved in programmes planning and implementation along with their own contribution, may be up to 1 to 5% of the total project cost. This will help in creating a sense of ownness among stakeholders about the project and also help to bring about subsequent development in the rural area. For development of rural infrastructure, it is also felt necessary that the people’s participation in planning and implementation of various agriculture development programmes would be a key factor in successful implementation of the project. To achieve this goal National Agricultural Technology Project which is presently being implemented on pilot basis, needs to be extended to whole State by creating institutions at proposed at various levels of the project implementation with participations of local community, staff of agriculture and line departments, NGOs, farmers organizations, SHGs etc.

As expected in the project, some agricultural extension activities like demonstrations, trainings, capacity building, exposure visits etc. will be handed over to NGO’s, farmers organizations or groups of village community to learn and adopt techniques and skills through actual implementation of these activities. At initial stages, Government departments would perform the role of a facilitator that should also be handed over subsequently to the institutions at various levels on acquiring proper competence to continue project activities on long term and sustainable basis. This may help in reducing financial burden on public sector and attract more investments from the stakeholders mostly from NGOs and private sector including farmer’s own investments.

Finance made available through National Horticulture Board is focussed mainly on assistance for post harvest infrastructure development like grading, packing, cold storage. At present, hitech agricultural enterprises financial assistance is available upto Rs.50 lakh per unit which is linked with bank finance. Small sums are also provided for activities like HRD, Farmers exposure visits and Udyan Pandit Competition etc. Earlier, the NHB provided financial assistance in the form of soft loan at concessional rate of interest i.e. 4% with 1 to 2 years moratorium to hitech floriculture units under private sector. But most of these units could not pay back the amount and were declared as Sick Units. The group thus proposed that NHB may financially assist more no. of groups of small entrepreneurs under Hi tech agriculture and P.H.M. The human resource from these enterprises be retooled through regular HRD programme in technical and managerial skills.

APEDA, a Government agency from the food processing division under Commerce ministry of Govt. of India is providing financial assistance for PHM infrastructure, agri-export promotion and to some extent for HRD activities in Agro processing and Agri export sector.

Since most of the Agro produce is exported from Mumbai and by exporters and farmer’s commodity organisation like Mahagrape etc., massive programme through adequate financial assistance for promotion of agricultural produce export needs to be undertaken though focussed attention on fresh and processed agriculture and horticultural commodities. It is proposed that a State level agency on the lines of APEDA be established by utilizing available manpower with the
State Government to undertake export promotion by creating special export zones, establishment of food parks etc. The agency would perform the role of only facilitator for development of infrastructure through joint ventures or solely with private sector investment.

**Credit through banks:**

Maharashtra stands first in the Country in respect of both aggregate deposits and bank credits. Though the State had a share of only 9.5% in the total number of banking offices in India, its share in aggregate deposits and gross credits was higher at 18% and 26% respectively upto June, 2001. State lead bank (Bank of Maharashtra) through its potential linked credit plan for the year 2001-2002 indicated credit provision of Rs. 7673 crores for different development sectors disbursed through Nationalized banks, RRB’s and Cooperative banks. Total credit disbursement during 2000-2001 was Rs. 6089 crores in rural areas of the State. Of this the credit disbursement for agriculture and allied activities was Rs. 4558 crores which included crop loan component of Rs. 2828 crores i.e. 62%. The share of credit for agriculture and allied activities during both the years was 75%.

**Co-operative credit:**

The Co-operative movement in the State has played a vital and prominent role in the social and economic development of rural areas in the State. Initially, this movement was confined mainly to the field of Agril. Credit which subsequently spread to other fields like agro processing, agro marketing rural industries, consumer stores, social services etc. Cooperative institutes available for credit disbursement includes State Cooperative Banks, RRB’s, District central Co-operative Bank, MSCARD Bank, Primary Agril. Credit Societies etc. The State has 30 Districts Central Cooperative Bank’s operating through 3804 branches; Till March 2001, the total number of co-operative societies in the State were 158016, out of which 20551 are primary agricultural credit societies, 22014 are non agricultural credit societies, 1115 marketing societies, 39070 are productive enterprises (sugar factories, rice mills, dairy societies etc.) and 75232 are social services and other co-operative societies (consumer stores, housing etc.)

Primary agricultural credit societies, are grass root level co-operative credit institutions, playing a pivotal role in disbursement of short term agricultural credit. However, high level of overdues and ineffective resource mobilisation continued to be the major reasons of weaknesses of PACS. As on 31st March 2001, there were 20551 primary Agricultural credit societies with membership of 94.70 lakhs khatedar’s. The loan disbursement was Rs.1793 crores, Rs.2289 crores, Rs.3258 crores and Rs.3181 crores respectively during 1998-1999, 1999-2000, 2000-2001 and 2001-2002. But the recovery of this loan is upto 55 to 60 % as quoted by Co-operation department.

In addition, the State Government has established Maharashtra State Cooperative Development Corporation in the year 2001-02 under Company’s Act 1956 with 51% share capital from State Government and 49% share from Co-op.Societies to meet the financial requirements of co-operative sector in the
State. This corporation has raised the initial share capital of Rs. 100 crores. The corporation advanced loan towards share capital of State Government to Co-op. Sugar factories. It has planned to raise Rs.100 crores through shares and Rs.650 crores as deposits from the cooperatives in the State during next 10 years.

N.C.D.C. is another corporation at National level which provide finance to co-operatives for infrastructure development, It has played a pivotal role in providing finance to majority of co-op. Sugar factories and Agro processing units like co-op. Spinning mills, dairy projects etc.

The State has vibrant farmer’s commodity organization like Mahagrape, Maha mango, Mahapomegranate, Maha banana etc. , providing technical assistance and market intelligence to members. They also help the member farmers in procuring the specialized inputs on “No loss No Profit” basis. This ensures supply of genuine quality inputs at reasonable prices. These organisations are also providing support in marketing the produce by providing regular marketing intelligence to the members and through regular capacity building programmes in technical, managerial and marketing matters.

National Bank for Agriculture and Rural Development (NABARD) is the apex bank in the country for supporting and promoting Agricultural and Rural Development. It performed following financial activities in the State during the year 2000-2001.

Short term credit limit sanctioned for supporting seasonal agricultural operations by the co-operative banks and regional rural banks in the State aggregated to Rs. 341 crores as compared to 248 crores during previous year. A refinance assistance of Rs. 616 crores was disbursed by NABARD to various credit agencies in the State under investment credit during the year 2000-01. It also sanctioned Rs. 439 crores financial assistance to the State Government for 1159 rural projects under rural infrastructure development fund.

Co-operative Marketing:

The basic objective of co-operative marketing is to prevent exploitation of agriculturist by traders and to enable the cultivators to have better returns for their produce by making arrangements for purchase and sale of their produce and also to benefit consumers to avail quality goods at reasonable prices. With these objective in view, financial assistance in the form of share capital and loan is provided by the State Government to cooperative marketing societies. In recent years, marketing of agricultural produce has registered an impressive growth.

The number of co-operative marketing societies including district/central marketing societies and Marketing Federation by March 2001 was 1115 with a membership of 8.32 lakh and working capital of Rs. 1489 crore. The turnover of these societies was Rs. 5171 crore during 2000-01.

The Maharashtra State Co-operative Marketing Federation has a working capital of Rs. 34 crores as on 31st March, 2001 and its total turnover during
2000-2001 was Rs. 449 crore, out of which agricultural requisites accounted for 52%.

The Maharashtra State Cooperative Cotton Growers Marketing Federation has a working capital of Rs. 1171 crore as on 31st March, 2001 while its total turnover during 2000-2001 was Rs. 4059 crore.

Maharashtra has a strong industrial base. Since 1991-92, the State has registered 10,063 industrial projects with investment of Rs.2,28,282 crores of which 4328 projects are implemented upto Dec.2001 with an investment of Rs.61,375 crores, creating employment generation for 3,184,390 jobs. The state accounts for 17% of the FDI in the industrial sector. The Govt. of India has approved 2473 projects with an investment of Rs.46402 crores. Out of these 827 (33%) projects with an investment of Rs.17,024 crores (37%) have already been commissioned by Jan.2002. But the share of the Agro based industries is comparatively low in the total industrial sector.

**Productive Enterprises** :

The processing of Agril. Produce has a strategic place in development of rural economy. Number of co-operative societies engaged in productive enterprises till March 2001 was 39070 with a membership of 59.63 lakh and working capital of Rs. 9943 crores. Out of these 797 co-operative societies were independent processing societies that included 202 sugar factories, 289 Cotton Ginning and Pressing Societies, 91 Rice Mills, 22 Oil Mills etc.

Value addition in agri. production may be thought of as one of the income generating activity in future. With very little investment, this sector is dominated by private sector, while very little of it is through public sector. This sector is still lagging behind the industry sector which needs to be further promoted through some specific incentives as it is done for industrial development in the backward areas and also by providing additional incentives for development of specific infrastructure like creating special Agro industrial zones and Agro export zone, central facilities for Agro processing, Marketing, Export and Biotechnology etc.

**Agricultural Marketing** :

In order to regulate the functioning of APMCS in the State, the Maharashtra State Agril. Marketing Board has been established in 1984 as a statutory Body. There are at present 274 regulated Market Yards, 591 Sub Market Yards and 2700 unregulated village Markets including “Adivasi Bazar” in the state.

Information regarding arrival, Sale and Value of the Agro produce for the year 2000-2001 is as below.

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Commodity</th>
<th>Arrival(MT)</th>
<th>Sale(MT)</th>
<th>Value(Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fiber</td>
<td>649795</td>
<td>649795</td>
<td>11107618599</td>
</tr>
<tr>
<td>2</td>
<td>Cereals</td>
<td>2453774</td>
<td>2423212</td>
<td>14580781694</td>
</tr>
<tr>
<td>3</td>
<td>Pulses</td>
<td>726986</td>
<td>722620</td>
<td>11642622719</td>
</tr>
</tbody>
</table>
Export:

Out of the total 44.03 lakh MT (23.9 lakh MT cereals, 4.55 lakh MT processed fruit and vegetable products, 9.18 lakh MT of other processed foods, 6.23 lakh MT fruit & vegetables, 20.12 lakh MT floriculture and seeds) export of fresh and processed Agro produce worth approximately Rs.7575.7 crores from the country, the State accounted for 90% share in Grapes, 65% in Mango, 60% in fresh Vegetables, 85% in Onion and 15% other fruits. The State has an advantage of well-established coastal and air communication network. However, the present financial assistance available in air freight for export promotion is at the rate of Rs.10 per kg. or 25% of the air freight or 1/3 of the FoB Price whichever is very less for West Asian, South-East Asian and CIS countries, while Rs.25 per kg. or 25% of air freight or 1/3 of FoB Price whichever is less for Europe, North America and North-East Countries administered through APEDA. Similarly, financial assistance is also available from State Government and APEDA schemes for creating PHM infrastructural facilities, pesticide residue testing, HRD, R & D, Packaging, Marketing etc. However, present level of assistance is very inadequate to make the exports of agro produce more competitive in export markets which needs to be enhanced. The group therefore propose that more funds should be made available for export and PHM infrastructure from APEDA schemes.

External Sources:

Apart from State and Govt. of India's funds, the State Govt. is also recipient of financial aid from World Bank for National Agril. Technology Project. This project is implemented in the State along with other six states selected for implementation on pilot basis. This project is under implementation in four selected districts of the State. The project provides for financial assistance for Research and extension components. Total investment plan during the project period (1998-2003) for the innovative technology dissemination (extension) component is Rs.20.87 crores. This includes funds for four districts, state headquarter cell and the state level Agril. Extension Management Training Institute.

The State Govt. has also submitted concept paper on Agril. Intensification and Diversification Project to Govt. of India for financial assistance from World Bank.
during March, 2000. This project would basically aimed at improving crop productivity through simple and innovative technological interventions and diversification of areas towards more remunerative horticultural crops like vegetables, spices, floriculture and aromatic and medicinal plants.

The principal objectives of the project would be to increase agricultural productivity of Maharashtra’s rainfed farming systems, promote horticulture production and its vertical integration with post harvest handling and processing for value addition, support technology generation and demand driven technology dissemination, strengthen network for soil/inputs testing and quality control and improve rural infrastructure.

In addition, the project would address policy and Institutional constraints to increase productivity and efficiency of public expenditure, reduce rural poverty, gender inequality, promote community based participatory approach and private sector participation.

In pursuit of the above objectives, the project would have the following components:

- Market driven intensification of rainfed production combined with stimulus to community participation – Rs. 625.5 crores.
- Development of horticultural crops with effective vertical integration through promotion of private sector participation in post harvest value addition activities- Rs. 50 crores.
- Enhance technology generation and dissemination through trained extension workers coupled with rehabilitation and up-gradation of facilities for soil testing and input propagation/testing, to address constraints limiting productivity increase- Rs. 600 crores.
- Strengthening of rural infrastructure (Markets and Roads) to improve accessibility of farmers to markets and up-grading facilities for up to date market information – Rs. 410 crores.
- Assistance for addressing policy and institutional constraints through appropriate reforms. – Rs. 12.5 crores.
- Support for project management and M&E - Rs. 67.5 crores

Total estimated project cost for a period of five years is to the tune of Rs. 1792.5 crores. Approval of this project would certainly help in improving rural marketing infrastructure alongwith diversification, value addition and crop productivity in rainfed areas.

**Private Sector:**
Availability of finance for Agricultural Development from all above institutional outlets from Public and Banking sector caters the need of only up to 25% of the farmers as is seen from the available data, where as 75% of the farmers have to depend on the borrowings either from the moneylenders, may be traders or middlemen or from their own resources. This is one of the grey area where the financial institutes have to take definite view to bring more no.of farmers under the network of institutional financing.
The group has noticed some deficiencies in making available more finance for development of agriculture sector in the State which are brought out as issues mentioned below.

- Less provision of Government funds for Agriculture Development Programmes compared to other sectors of development.
- Large scale default in recovery of bank loans.
- Large no. of processing units under NPA Category due to poor management and lack of entrepreneurship skills.
- Less response from the financial institutions to provide appropriate financial rehabilitation package to sick NPA units.
- Slow progress under issue of Kisan Credit Cards.
- Poor participation of private sector for investment in agro processing, PHM and other related infrastructure development projects.
- Failure of Hi-tech Projects in Horticulture and Mushroom sector due to initial high cost, unexperienced management and very wide market fluctuations.
- Lack of proportionate investment in R & D and HRD activities.
- Multiplicity in tax structure and lack of simplified procedures, rules and regulations in establishing the Agro Processing, PHM and Agro based industries and enterprises.
- Very less incentives for export promotion to make the Indian Agri. Commodities more competitive in export markets.
- Less provision of funds for NHB and APEDA schemes by the respective institutes.

Success Stories:

National Technology Project is being implemented in the State on pilot basis. Main focus in the project is on bottom up planning and implementation of the project. Various innovations in technology dissemination are being tried in this project. Farmers in the State are motivated to form the groups of their own interest like commodity groups or groups pursuing activities like sericulture, dairy, seed production, muscle production, direct marketing of vegetables etc.

A success story of Mussel production by a group of women farmers, Ratnagiri can be a motivating experience. Because of the ever increasing number of mechanized boats, catch to the traditional fisherman in decreasing day by day. In turn the per capita income to traditional fisherman in Ratnagiri is decreasing alarmingly.

Mussel is a bivalve and a delicacy both at local level and at international level. It is collected from wild and sold in the market. ATMA intervent and funded training programmes mussel culture in Ratnagiri dist. 28 women farmers had been trained. 3 self help women group came forward and had started the mussel culture. After 4 months a group produced approximately 2000 kg. mussel with a net profit of above Rs. 10000/-.

Considering the demand at local as well as international level the success story can be replicated throughout the coastal area of the State.
As well as among the success stories identified under NATP in the State Sericulture has been identified as diversified profitable farming enterprise by ATMA- Ahmednagar.

Four farmers interest groups are formed which are associated with ATMA. One farmers interest group is registered as co-operative society and process initiated for federating the groups. The successful farmers and farmer interest group members are used as resource persons for further work.

The area under mulberry cultivation has increased in the district. The cocoons are graded for marketing. The damaged and discarded cocoons which are not useful for any purpose are not useful for any purpose are used for making handicraft articles such as garlands, visiting cards, wall pieces for making such handicraft a women farmer groups come forward.

This success story of sericulture in Ahmednagar district can be replicated in other districts in the State.

MOBILIZING RESOURCES
16.1 Motivation of farmers organization for skill upgradation of their managerial manpower to meet future challenges in Agri. processing, Agril. business and export.

16.2 Induction of compulsory Agril. Subjects in course curriculum of middle school education to create awareness and develop liking for agriculture, conservation, enhancement for fragiles, ecological system and conservation as well as regeneration of natural resources.

16.3 Draw out a mutually agreed capacity building plan for human resource development in public and private sector.

16.4 Develop trained and skilled manpower and faculty for human resource development in the upcoming area like Bio technology, Information technology, Genetic Engineering both under Public and Private sector.

16.5 Draw out a plan for capacity building in managerial skills of existing man power in input management, Quality control, Agro processing and Agro marketing from public & private sector.

16.6 Privatising agril. research and education activities to generate more skilled agri based human resource.

16.7 Assistance for installation of Agril. information centres in rural areas with necessary technical and managerial backup through training of entrepreneurs.

16.8 Creating a separate cells under Commissioner of Agriculture to promote subject like Agro Meteorology, Agri business, Agriculture export, and WTO related issues in Agriculture.
16.9 Strengthening MCAER on the lines of ICAR to coordinate research and education activities in all four Agril. Universities to avoid duplication and multiplicity of scheme & projects and to effect coordination between SAUs and Government Departments.

16.10 Govt. accreditation to Private institutes for effective capacity utilization and create conducive atmosphere for private investment.

16.11 Formation of core group in the form of a institute with representation from public and private sector to discuss, deliberate, guide and motivate the stake holders in development of Agriculture in the State through periodical review.

16.12 Attract Private sector investment in contract Research through joint venture with public institutions.

16.13 Integrated effort to utilize the infrastructure in public as well as in private sector for meeting the Agro technological requirements of Farmers, Research, Extension workers, Agri. Business and Export houses in private sector on mutually agreed terms and conditions.

16.14 Create adequate institutional infrastructure for Research and Development activities under upcoming areas like bio technology, information technology genetic engineering, hi-tech agriculture etc.

16.15 Provide information support in marketing the agricultural, produce through private entrepreneurs and FOs and FIGs in rural area.

16.16 Privatisation of certain areas like marketing, agro processing and export where government has to act as a facilitator and a co-ordinator needs to be taken up in right earnest.


16.18 Provide more support to agro polyclinics for creating modern and latest infrastructure with skilled manpower for technology dissemination, providing consultancy and diagnostic services.

16.19 Utilize agro industrial infrastructure for more efficient use through joint venture with private sector.

16.20 Encourage project based research in upcoming high tech agril. Areas through joint venture with private sector.

16.21 Create additional infrastructure in public and private sector institutes to increase their intake capacity to provide additional skilled man power in specific upcoming areas.
16.22 Proportionate Budget allocation for agriculture sector as that of it share in State's GDP

16.23 Issue of kissan credit cards to all farmers to avail facility of annual credit and recovery, instead of seasonal operation.

16.24 More funds to be made available for agro processing industries other than sugar factories and cotton ginning and pressing factories, like alcohol, ethanol, processed products, post harvest handling and grading etc.

16.25 Provide more funds for promotion of agri business and agro processing as well as agri export through NHB and APEDA schemes.

16.26 Special and additional incentives like tax-benefit, enhanced moratorium period etc. Avoid multiplicity of taxes, subsidized power and water supply etc. to the food processing sector.

16.27 Projectised and increased financial assistance to the FIG's/FOs in rural areas to takeup PHM, agril. Marketing, agri business activities, ensuing food security, livelihood, projects and the projects on conservation of agro diversity at their own or through their federation. Special benefits through schemes for community projects like Food Park, Agro-Horti Estates, Community Markets (Rayatu Bazar) etc.

16.28 Submit proposals for financial support from world bank to extension project in lines of NATP to make it applicable throughout the State. In addition to new projects in areas like, rural self-employment, intensification of Agril. and diversification project, saline land reclamation, Hi-tech Agril. projects including Horticulture development, Agril. Marketing, I.T. application in Agriculture, Agro Processing, Watershed development, Promoting organic farming, use of Biotechnology in Agriculture and other environment friendly.

16.29 More funds should be made available from public sector for research in agriculture.

16.30 Agro based projects for promotion of concepts like IPM, INM and IRM etc.

16.31 Policy reforms in existing land ceiling laws to attract more investment from private sector in Agro processing and export through contract farming which protects the interest of resource poor and marginalized section of rural population.

16.32 Promote self-certification concept to attract investment and incalculable more accountability in Agro inputs and Agro processing sector.

16.33 Privatization of certain areas like marketing, Agri processing and export where Govt. has to act as facilitator and co-ordinator.
16.34 Create investor friendly atmosphere for ensuing more private sector investments in upcoming sectors like Biotechnology, I.T., Hi tech Agril. and some specialized field in Agril. Sector.

16.35 Ensure involvement of NGO sector like BAIF, WOTR, etc as a source of capacity building, Bio-diversity fund as well as field gene fund as additional source of funding.

16.36 To demonstrate the impact of coordinated efforts, State should implement an integrated project for market led production and marketing with farmer Research-Extension-Market operators partnership concept involving stakeholders as producer farmers, Research and Extension functionaries in public & private sector and markets operators like processors and exporters. Such projects in each district should compromise of major components like market led contracted production by the farmers at mutually agreed price with buyback arrangements for which a projectised extension system would be required.