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**Institutional Development for a Value
Chain Approach to Agribusiness in
Bihar and Maharashtra**

**Preliminary Review and
Formulation of Agricultural
Marketing Policy in Bihar**

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TABLE OF CONTENTS

1	INTRODUCTION.....	2
1.1	ORGANIZATION OF THE REPORT	2
2	REVIEW OF POLICY ON AGRICULTURAL MARKETING POLICY IN BIHAR	3
2.1	REPEAL OF THE APMC ACT IN 2006.....	3
2.2	THE AGRICULTURAL ROAD MAP 2012-2017	4
2.3	BOTTLENECKS	7
3	KEY ELEMENTS OF A NEW AGRICULTURAL MARKETING POLICY	11
3.1	A CLEARLY STATED VISION.....	11
3.2	EXPORTS AND COMPETITIVENESS.....	11
3.3	IMPLEMENTATION FACILITY	12
3.4	VALUE CHAIN DEVELOPMENT ORGANIZATIONS.....	12
3.5	VALUE CHAIN INFRASTRUCTURE.....	14
3.6	MARKET INFORMATION AND INTELLIGENCE	14
3.7	INNOVATION FUND	14
3.8	RESEARCH-EDUCATION-EXTENSION (REE) INTEGRATION.....	15
3.9	CAPACITY BUILDING	15
3.10	MONITORING AND EVALUATION AND REWARDS SYSTEM	15
3.11	DEMAND-DRIVEN EXTENSION	16
3.12	ORGANIZED RETAIL IN HORTICULTURAL PRODUCTS	16
3.13	FUNDING	16

1 INTRODUCTION

1. This document provides the preliminary review and formulation of Agricultural Marketing Policy in Bihar. The document is based on review of the Agricultural Road Map 2012-17, two policy roundtables (in July and in November), consultation with various stakeholders and experts in Patna and various districts.
2. The document is very preliminary and intended to get feedback from the rest of the team before submitting a draft to the Government.

1.1 ORGANIZATION OF THE REPORT

3. This report is organized into 3 chapters including this introduction. Chapter 2 provides a review of the Agricultural Road Map 2012-17 from the angle of agricultural marketing. Chapter 3 provides the outline of the key elements that are suggested to be part of the Agricultural Marketing Policy.

2 REVIEW OF POLICY ON AGRICULTURAL MARKETING POLICY IN BIHAR

4. The key elements of existing policy on agricultural marketing in Bihar are reflected in two decisions: the repeal of the APMC Act in 2006 and the Agricultural Road Map (2012-1017).

2.1 REPEAL OF THE APMC ACT IN 2006

5. The repeal of the APMC implied that market yards are rent free, agricultural produce can be directly purchased from farmers, and there are no market fees. However, in the absence of an organization (private or public) that is in charge of functioning of market yards, new investment in market infrastructure and expenditures on operations and management has not occurred. As a result, urban APMC market yards are currently in great disrepair, their functioning is chaotic, and their infrastructure is dilapidated. The markets are overcrowded but new market places have not emerged.

6. Repeal of the APMC Act has opened up the opportunity for the emergence of a constellation of different marketing structures that could provide alternatives to farmers, enterprises, and consumers. Alternative market structures might include the following:

- APMC markets yards free of market fee
- Private markets
- Direct procurement from farmers
- Direct selling by farmers
- Cooperative marketing
- Producer company marketing
- Contract farming
- Modern retail (supermarket chains)
- Traditional markets
- Rural markets
- Terminal markets
- Electronic auction markets
- Warehouse receipt systems
- Food parks

7. By providing the opportunity of developing a number of alternatives to the traditional APMC market yards, the marketing system could have improved through the combination of:

- i. modernizing the marketing system infrastructure
- ii. improving farmer's benefits
- iii. improving value to consumers
- iv. promoting agribusiness enterprise development

8. To a large extent, these improvements of the marketing system have not yet occurred. The response of farmers, cooperatives, and private sector has been tenuous in agricultural marketing. Only a few examples of direct marketing and very few and small private markets have emerged. By and large since 2006, there has not been any substantial improvement in APMC market yards or value chain infrastructure such as packhouses, collection centers, cold/cool/CA storage, and primary processing centers.

9. Only in the food processing industry the response has been more positive with investment by the private sector in industrial parks (eg Hajipur). Some corporate (eg. Britannia in the biscuit industry, Ruchi in oilseeds) have responded to the incentive programs the State has offered to the food processing industry. In addition to the corporates a number of small and medium food processing enterprises have also benefitted of the government incentive programs, based on viability gap funding (VGF) mechanism.

10. In spite of this positive response in the food processing industry, the agricultural marketing of the state has not yet been altered fundamentally. In the case of horticultural products, as already mentioned, the market yards are still characterized by very rudimentary infrastructure, the yards organization is chaotic, collection of farmers' produce is still done in a traditional way with minimum grading and packaging, and hardly any attention is given to quality and improved postharvest practices. Prices are highly variable and there are no mechanisms to ensure that farmers capture higher and more stable income from their produce.

11. The main lesson seems to be that most alternative marketing structures (as listed in paragraph 1) will not evolve spontaneously, but require a set of favorable conditions. Elements of these favorable conditions include a conducive investment climate, supporting institutions and regulatory framework, adequate infrastructure, and a comprehensive package of capacity building and incentive programs. Ultimately, alternative marketing structures have to prove themselves as viable and real options that permit farmers, traders, enterprises, and consumers to realize higher efficiencies and benefits.

2.2 THE AGRICULTURAL ROAD MAP 2012-2017

12. The Agricultural Road Map for 2012-17 was approved by the state cabinet on 3 April 2012 after one year of intense preparation that involved 18 departments working under the Agricultural department, in addition to numerous consultations with scientists, experts, and farmers. The road map pays attention to not only production, but also to basic infrastructure (roads and energy), productive infrastructure (eg irrigation), marketing, storage, processing, and research and education.

13. The road map is comprehensive and promotes a "Rainbow Revolution" that is sustainable and green. Plantation of 240 million trees, rural electrification, investment in roads, and a land survey to be completed in 3 years are some of the key pillars. The program is ambitious in terms of expected financial outlays (see **Table 1**) and requires financing of about 1.5 lakh crore (equivalent to about US\$30 billion over 5 years). The road map envisages tentative targets for 10 years and a more detailed timebound programmes for the 5 years period of 2012-17.

Table 1 Total Investment in Agriculture 2012-17 (Rs Crore)

	Public	Private	Total	Share
Agricultural Production (crop and horticulture)	13,751	0	13,751	9.2%
Animal Husbandry, Dairy and Fisheries	12,025	277	12,302	8.2%
AJIVIKA Mission	700	0	700	0.5%
Water Resources		0		18.1%

	27,160		27,160	
Minor Water Resources	11,460	0	11,460	7.6%
Energy	7,504	2919	10,423	7.0%
Land Resources Management	662	0	662	0.4%
Plantation and Environment	2,471	0	2,471	1.6%
Storage	4,144	4109	8,253	5.5%
Processing	2,785	11140	13,925	9.3%
Marketing	2,001	2080	4,081	2.7%
Cooperative	4,069	0	4,069	2.7%
Approach Road	38,452	0	38,452	25.7%
Agricultural Research and Education	2,150	0	2,150	1.4%
Total	129,334	20,525	149,859	100.0%
Share	86%	14%	100%	

Source: Author's calculations based on Agricultural Road Map 2012-17, State of Bihar

14. Basic infrastructure (eg roads, energy) and productive infrastructure (eg irrigation) are allocated about 58% of the total investment. Market infrastructure (storage, marketing, processing) is allocated about 17.5% of the total. The private sector is expected to make the largest contribution to market infrastructure, namely 66% of the total, whereas in other types of infrastructure, the contribution of the private sector is as little as 2.6% (see Table 2). The expected higher contribution of the private sector implies that a favorable investment climate has to be established.

Table 2 Investment in Market infrastructure (Rs Crore)

Item	Public	Private	Total	Share of Total
Storage	4,144	4109	8,253	5.5%
Processing	2,785	11140	13,925	9.3%
Marketing	2,001	2080	4,081	2.7%
Total Market Infrastructure	8,930	17,329	26,259	17.5%
Shares of public and private in Total Market Infrastructure	34.0%	66.0%	100.0%	
Investment other than Market Infrastructure	120,404	3,196	123,600	
Shares of public and private in Investment other than Market Infrastructure	97.4%	2.6%	100.0%	

Source: Author's calculations based on Agricultural Road Map 2012-17, State of Bihar

15. In the case of the horticultural sector, the road map envisages an accelerated increase of production (see **Table 3**) of production with an expected average growth rate of 5.7% over the next 10 years. This is much lower than the envisaged growth of food grain production, targeted at annual rate of 9.6%. Targets are an expression of the priority of the Government. However, for targets to be realistic, at least three conditions should be taken into account: (i) inputs and infrastructure required to achieve the target are planned and implemented; (ii) market demand can absorb the envisaged growth of production; and (iii) the capacity of private sector and state to meet the demand.

16. Assuming that the necessary inputs and infrastructure are available the questions remain of market demand and capacity to meet the demand. On the market demand, given the high elasticity of income of fruits and vegetables, it is likely that there will be sufficient demand either in India or abroad for fruits and vegetables. On the other hand, it is not clear that demand for foodgrains will grow at 9.6% but perhaps foodgrain production in Bihar will not necessarily respond to market demand, but to the procurement targets of the government of India.

17. In the case of horticultural products, the issue is to what extent the increase in demand will be absorbed in Bihar and outside of Bihar. In the absence of reliable and updated study of demand, it is difficult to answer this question, but for the purpose of the following discussion, let us assume that 50% of the increase in production of fruits and vegetables is absorbed by Bihar and 50% by customers outside of Bihar.

18. Meeting the demand for fruits and vegetables outside of Bihar (whether in other states of India or abroad) will require capacity involving not only better infrastructure, but also effectiveness in promoting commercial linkages, finding finance and risk sharing, marketing, and availability of improved technology to farmers and enterprises. The capacity of all the value chain actors (input providers, producers, logistics agents, packhouse managers, cool/cold/CA storage managers, processors, packers, finance providers, marketers, wholesalers, retailers) needs to be improved. Fundamental to this will be a **massive effort in capacity building for value chain development**.

19. It is also important to internalize that an orientation towards exports (outside of Bihar) of the surplus of fruits and vegetables requires the improvement of competitiveness of Bihari actors in the fruit and vegetables industry. Currently, there is no such assessment that can provide a benchmark against which to compare future improvements. Yet competitiveness is a concept that is elusive in the agricultural roadmap.

Table 3 Production targets (lakh mt)

Item	Current	2017	2022	% increase 2012-2017	% increase 2012-2022	Annual growth rate over 5 years	Annual growth rate over 10 years
Fruit production	38.53	60.37	80	57%	108%	9.4%	7.6%
Vegetable production	136.27	186.11	225	37%	65%	6.4%	5.1%
Total Fruit and Vegetable Production	174.8	246.48	305	41%	74%	7.1%	5.7%
Food grain production	129.81	252.21	324.65	94%	150%	14.2%	9.6%

Source: Author's calculations based on Agricultural Road Map 2012-17, State of Bihar

20. On marketing and processing, the Agricultural Roadmap targets 30% of fruits and vegetables production to be processed, wastage to be reduced to 5%, and creation of 2 Rural Agribusiness Centers (RABC) in each block and 3 Mega Food Parks based on fruits and vegetables.

21. Even though the physical targets are clear, the process through which they are arrived at is not clear. As such, their realism (for example wastage reduced to 5%) is difficult to ascertain. More

importantly, it is not clear the overall aims of agricultural marketing policy. The roadmap contains targets in terms of physical and financial outlays for marketing (development of market yards, rural haats, private and cooperative integrated value chains –IVC-, market management, storage and processing), but the **overall development objective** is not clear. The goals and the instruments are confused. To have more storage and processing are instruments, but the target should be related to indicators such as farmers income, growth of the economy, improved livelihoods, improved food quality and safety, and improved competitiveness.

22. The key **elements** of the agrimarketing policy in the ARM seems to be:

- Participation of cooperative, private, and joint (public-private) sector
- Use of APMC market for public warehouses of foodgrains
- COMFED type of federation for fruits and vegetables
- Promotion of Integrated Value Chains (IVC) and rural haats
- Support to private investors in storage and processing
- Processing at 30% of horticultural production
- Increase in storage
- Establishment of new positions in government
- Expansion of agricultural roads, irrigation, and rural electrification

23. The Agricultural Road Map does not provide a clear analysis of the **constraints** to agricultural marketing. The discussion of target implies that the major constraints to marketing are:

- a. Weak farmer organizations
- b. Poor integration of farmers with the market
- c. Insufficient storage and processing
- d. High wastage

24. The reader is left with the concern that even if large amounts of public investment are injected into the resolution of these constraints, still fundamental bottlenecks to the implementation of the road map might emerge. The next sessions will elaborate on these bottlenecks including:

- a. Capacity of various actors (government officials, farmers, enterprises, service providers) in value chain development
- b. Institutional mechanism to promote value chain development
- c. Effective monitoring and evaluation system linked to rewards and promotions
- d. Use of subsidies: improvement of productivity and competitiveness or other purposes?
- e. Scaling up and aggregation
- f. PPP in market infrastructure

2.3 BOTTLENECKS

25. **Capacity building in marketing and value chain development** is largely neglected in the Agricultural Road Map. Yet, the overall success of any marketing strategy depends on the capacity of the human resources involved. Marketing and value chain development is about increasing value and competitiveness through organized linkages in the value chain and innovation. In practice, that *means doing things differently*, changing ways of producing, marketing, processing, and distributing. This requires education, extension, demonstrations, and capacity building through exposure to similar experiences in other parts of India and abroad. This type of capacity building can be partly conveyed through a better education system comprising the universities and colleges. However, the needs go beyond academic education. In addition to formal learning, good practices of value chain

development need to be communicated, internalized and adopted, in a similar way that technologies are disseminated. Good practices in value chain development are largely unknown not only by farmers, but also by service providers (including government extension staff and finance providers) and other actors of the value chain (traders, input providers, processors, logistics operators, etc.).

26. **The strategy of promotion of agricultural marketing in the Agricultural Road Map is not clear.** Who will be responsible for disseminating information about the schemes to farmers and private sector? How will farmers and private sector apply to the schemes? The policy refers to some “new positions”. However, new positions at the state level without a functional unit in charge of promoting the sector, coordinating various programs, communicating with districts, and monitoring and evaluating implementation of programs are not likely to be effective. If the existing departments and functional units are envisaged to implement the Roadmap, it is doubtful that the targets will be achieved since they have neither the capacity nor the motivation. More importantly, the improvement in productivity and competitiveness of smallholder farmers in Bihar might remain elusive at best.

27. The current public sector system at the district and bloc level is characterized by human resources that often have limited capacity, but, even more important, are not in the position of using whatever capacity they have for the purposes of agricultural extension or promotion of agricultural activities. A number of competing and different tasks are given to the local agricultural government officers such as the Bloc District Officers (BDOs) such as census, data collection, law and order, regulation enforcement; the execution of many other administrative staff not direct related to extension and agricultural programs leaves little time to the local agricultural officer to devote themselves to the execution of the primary responsibilities of their post. Lacking an effective monitoring and evaluation system, it is not possible to reward those who are doing their job effectively and identify ineffective program implementation issues so that corrective action can be taken on time.

28. **Effective monitoring and evaluation system.** The Agricultural Road Map hardly dedicates any space to monitoring and evaluation. The reader is left with the idea that the main targets will be monitored somehow. However, the main targets are all about physical targets of input and outputs or expenditures. Even if the targets were achieved, there would not be guarantee that the outcomes and impacts of those targets could be achieved. For example, the fact that a certain amount of seeds are produced, is not guarantee that those seeds reach the farmers on time, they are of good quality, are actually planted by farmers, and results in higher productivity and income for farmers. Similarly, the fact that rural haats or urban markets are built or upgraded is no guarantee that the marketing will be improved in terms of volumes, quality, safety of products, or in terms of less wastage, lower marketing costs, and higher returns for farmers. Unless an effective monitoring and evaluation system of programs and policies in the Agricultural Road Map is in place, it will be difficult to evaluate its implementation.

29. Implementation occurs through people. Effective implementation occurs through effective human resources. Undoubtedly, there are government officials at the district level or bloc level who are very dedicated and effective in their work. Their contribution unfortunately is often ignored. One reason that is ignored is that their contribution is not even recognized and known. Lacking an effective monitoring and evaluation system, a lot of good work is left unknown, unrecognized, and neglected. Promotions and rewards are not linked to performance.

30. Conversely, in the absence of an effective monitoring and evaluation system, cases of poor or ineffective implementation are also left unknown, unrecognized, and neglected. The combination of the neglect of both good performance and bad performance results in a lack of motivation of local government officers or complacency for poor performance. Lacking motivation and complacency feed itself themselves into a vicious circle of ineffective implementation. **To break this vicious circle a system of effective monitoring and evaluation has to be linked to performance evaluation.**

31. **Use of subsidies.** The Agricultural Road Map is a document that reflects a genuine concern for agricultural development in the State and expresses a political will to support the sector with an ambitious budget of about 1.5 lakh crore (about US\$ 30 billion over 5 years). The majority of the budget (almost 66%) is envisaged to be spent on basic, productive, and market infrastructure (roads, power, irrigation, market upgrading and construction, foograins storage). A considerable amount of resources is also going to be spent on subsidies (seeds, animal breeds, fertilizers, organic production, minimum support price for public procurement, processing, cold storage, renewable energy, irrigation equipment). The use of subsidies to support agriculture in Bihar Agricultural Road Map is not dissimilar from similar initiative throughout India.

32. The Agricultural Road Map should ask whether this is the most effective way to spend limited resources of the government. The drawbacks of subsidies system are well known (subsidies not reaching the intended beneficiaries, subsidies often benefitting the better off farmers and industry groups and traders, subsidies often in the service of vested interests and misappropriations, subsidies creating a culture of dependence, subsidies resulting in misallocation of resources); whereas the advantages of subsidies (in actual practice) are not really well documented.

33. Without entering into the vexing and long debate of subsidies in agricultural sector in India or Bihar, as far as the agricultural marketing for promotion of horticultural sector is concerned, it would be useful to know whether alternative ways to disburse subsidies could be identified, even on a pilot basis, that could contribute to higher productivity and competitiveness of the sector. The concern here is not about the amount of subsidies, but rather how to spend the subsidies available to the Government of Bihar in a more effective way. Unless new ways are found, then the lackluster growth experience of the last 15 years in India agriculture should caution against using the same methods as in the past. In spite of enormous subsidies, performance of agriculture in India has not improved. The same methods in the future are likely to produce the same results. Therefore, the idea would be to welcome the commitment of the State to agriculture as expressed in large outlays devoted to the sector and, at the same time, identify more effective ways to use the resources allocated.

34. **Scaling up and aggregation.** The Agricultural Road Map advocates the promotion of a federation for fruits and vegetables, similar to COMFED in milk. However, whether a COMFED-type organization is suitable for Bihar fruits and vegetables system at this stage of development is not clear. One should be wary of promoting a top-down structure to do agricultural marketing, since the likelihood that it will be competitive and sustainable is rather slim. It should not be forgotten that an effective cooperative system, federated at the state level, could emerge only through a gradual and organic process whereby small cooperatives/farmer groups/producer companies are formed, proved their success and then consolidated through mergers and/or acquisitions. To have a structure already determined from the beginning runs the risk that the initiative is pushed by the top rather than pulled by the market. Fruits and vegetables are perishable products like milk; however, differently from milk they are heterogeneous, with processing just one way to add value while several other ways to add value are through postharvest technologies applied to fresh produce. Fruits and vegetables production also varies considerably depending on the agro-ecological environment. While advocating and encouraging synergies, economies of scale, and consolidation in

the industry is welcome, the modalities that are proposed in the Agricultural Roadmap are perhaps jumping to conclusions too quickly. Bottlenecks in scaling up arise because of finance, capacity building, land fragmentation, logistics infrastructure, etc. The idea that a number of private, cooperative, public, and joint-sector initiatives are needed to promote marketing is a sound one. That flexibility of approaches should be preserved, rather than the full support for a specific model (COMFED type).

35. **PPP in market infrastructure.** For horticultural marketing to prosper, three types of market infrastructure are of crucial importance: (i) the collection centers/grading centers/primary processing centers/packhouses at the village level; (ii) the aggregation centers at the rural haat level; and (iii) the urban larger wholesale markets. In the case of horticultural produce, appropriate infrastructure facilities either do not exist (particularly at the village and rural level) or, when they exist, they are on premises previously occupied by APMC market yards. With the repeal of the APMC Act, there is no marketing organization that is responsible for the APMC market yards; as a result the yards are in disrepair and chaos. However, the State of Bihar has apparently decided that the APMC will develop these yards, primarily through the construction of warehouses for grains. Proposals to use these market yards in a PPP mode whereby private sector would be invited to upgrade market infrastructure and operate for a period sufficiently long to recover the initial investment were turned down by the State.

36. The major urban APMC market yards for fruits and vegetables are in great disrepair and overcrowded. In the past 20 years the State has hardly built new market yards build apart from those already established by the former state Agricultural Marketing Board. The repeal of the APMC Act makes it possible for the private sector to build a private market in Bihar; however it is doubtful that the private sector will find profitable to establish a fruits and vegetables market yard in the heavily congested urban areas where land prices are extremely high¹. The private sector might establish such markets in rural areas or in peri-urban areas, but not likely in main urban areas. **So the question remains of how the upgrading of fruits and vegetables APMC market yards will occur.** If the upgrading is done fully by the public sector, then the possibility arises that the old system of APMC markets might re-emerge, albeit in a different format.

37. Similarly, it is not clear what program for improvement of village/level infrastructure and rural haats infrastructure for horticultural products will emerge if the investment comes directly from the government. A government-centered investment in market infrastructure and value chain infrastructure might result in well-intended by poorly executed facilities not necessarily geared to meet market demand. PPP-type arrangements might have the double advantage of (i) saving government funds for investment in other budget items; and (ii) ensuring a build-in mechanism for efficient management of the market yards.

38. In summary, although the Agricultural Road Map has several physical targets related to marketing of horticultural products, it does not articulate a clear strategy for agricultural marketing policy. The remaining part of this paper will build upon the Agricultural Roadmap and will propose the outline of a new Agrimarketing Policy with specific focus on horticultural sector.

¹ One square food of urban land near the xx market for FV in Patna is about xxx.

3 KEY ELEMENTS OF A NEW AGRICULTURAL MARKETING POLICY

3.1 A CLEARLY STATED VISION

39. The Agricultural Marketing Policy should have a clearly stated vision. Identifying a vision implies a consensus building process whereby the key stakeholders participate and agree. As a result of this process, the vision for the horticulture agricultural marketing policy might indicate the objectives for the growth of the subsector, its competitiveness, and the benefits to farmers, enterprises, and consumers. The vision might also clarify whether the strategy will be primarily based on private sector development or cooperative sector development or some other mechanism.

40. For example, in Maharashtra a recent expression² of agricultural marketing vision is as follows:

“To develop a vibrant, transparent, competitive agricultural marketing system in Maharashtra by 2015, in which private sector will have a very decisive role, and, the State acting as facilitator, result in better price to producers, non exploitation of the consumers, create huge employment in the sectors allied to agriculture emerging out of backward and forward linkages, which will help the economy to grow at faster pace.”

41. As stated above, the vision statement should be articulated by the state and the key stakeholders. One starting point³ for discussion of this vision statement could be the following.

“By 2022, Bihar horticulture has an internationally competitive and sustainable agri-marketing system supported by modern infrastructure and a sustainable production system with private enterprise and cooperatives contributing to effective and integrated value chains which provide safe, secure, adequate and affordable agri-food produce to consumers and growing and sustainable income to producers”.

3.2 EXPORTS AND COMPETITIVENESS

The production targets for the horticultural sector indicated in the Agricultural Roadmap suggest that the state should become an exporter. The exportable surplus will either go to other states of India or abroad. If growth of the horticultural sector in Bihar will depend on exports of its produce outside of the state, the idea of competitiveness⁴ should be not only clearly specified in the vision, but also maintain high visibility throughout the implementation of the strategy.

² Put the reference here

³ We stress the fact that the vision needs to be articulated through a participatory process of consensus building. Therefore the statement proposed here is only intended as illustrative and needs to be further developed and formulated by the participatory process.

⁴ We define competitiveness as the ability of an entity (country/state/district/value chain/firm) to increase its share of domestic and export markets where the entity has a comparative advantage in a product when it can produce at a lower opportunity cost than other similar entities. Two issues emerge from this definition. First, the focus of competitiveness analysis should not only be on international market but also on the domestic markets. Secondly, the ability to compete depends on price competitiveness or on product quality.

42. A workable measurement of competitiveness should be established for the horticultural sector in each district and a **Competitiveness Index at District level** should be monitored regularly to ensure progress towards agreed upon targets. A very simple indicator of competitiveness might be the level of exports outside of the state. More sophisticated indexes can be also assessed taking into consideration different variables such as:

- Productivity (yields)
- Postharvest losses (% of production)
- Volume of storage (cubic meters)
- Storage in cool/CA/cold (cubic meters)
- Exports outside of country (mt)
- Exports to other state of India (mt)
- Packhouses (number)
- Processed products (mt)
- Total value of production (Rs)
- Total value of exports (Rs)
- Food safety incidents (number)
- Investment in the state (Rs)
- Certified (GAP, Global GAP, ...) groups/companies (number)
- Perceptions about investment climate (poll output)

43. The agricultural marketing policy might emphasize the role of exports of horticultural products from Bihar. Given the great potential of the state in horticultural products and the still low income level in the state, consumer demand in the state might not be able to absorb the surplus that could potentially be generated. However, unless demand is available, there is no point in increasing production as prices will fall and thus frustrate the expectations of farmers. Marketing planning is fundamental for farmers and value chain actors to identify the channels and customers who will buy the products that Bihar is able to offer. It is envisaged that most of these customers will be outside of the state, both within India and outside of India. In both cases higher requirements in terms of quality, delivery, and safety will be expected. Bihar's horticultural sector has to become competitive through enhancement of productivity at the farm level, development of postharvest systems, and innovation in products and processes throughout all the stages in the value chain. Targets for exports should be established. Moreover, the diaspora of Biharis throughout India and abroad could certainly facilitate the exports of Bihari products. Focus on exports means also branding of Bihari products, establishment of standards, certification, laboratories, etc.

3.3 IMPLEMENTATION FACILITY

44. Agricultural marketing policy is complex. It embodies the key concepts of value chain development and linkages among actors and sectors (production, industry, logistics, infrastructure, quality and safety, markets). Unless there is a well structured unit or facility deemed responsible for the implementation of the policy, it is unlikely that the policy is implemented effectively. This will require a dedicated unit that in this document can be referred to as **Bihar Agri-marketing Development Facility (BADF)** that would promote investment in the sector, coordinate policies and programs, collect and analyze market information and intelligence, monitor and evaluate policies and programs, and facilitate linkages at the state level and between districts and the state.

3.4 VALUE CHAIN DEVELOPMENT ORGANIZATIONS

45. The development of a competitive horticultural sector relies upon the development of effective value chains. Value chains⁵ stress the linkages among actors in order to gain value and competitiveness. However, the state has not yet established mechanisms that foster the development of value chains. The State has emphasized and promoted the formation of farmer groups and associations. Yet, these groups and associations are only one step in a value chain. The value chain needs to bridge over to other stakeholders.

46. Two mechanism that could be promoted in the State, and they would represent innovations not only in the State but in India are **Commercial Agricultural Alliances (CAA)** and **Value Chain Development Alliances (VCDA)**. In particular, the idea is to facilitate the formation of CAAs and VCDA in each district or across districts.

47. CAA is a body with non-profit status where representatives of farmer organizations, cooperatives, input traders, traders, and processors joint together to facilitate marketing of horticultural products, propose investments, support capacity building activities, and foster dialogue among different actors involved in marketing. CAA bridge the gaps among different actors. CAA could be endowed with funds that they disburse as matching grants to their members. In such a case we can talk about Commercial Agricultural Fund (CAF). These funds might include matching grants for market infrastructure (collection centers, packhouses, market yards, storage places). The participatory nature of the CAA would ensure that funds available from the government are used for the most appropriate uses and scrutinized in a transparent manner.

Box on CAA

48. VCDA has similar functions as a CAA. Its main difference is that it is focused on a value chain. would ensure dialogue and communication among stakeholders in a value chain including input providers, farmers, traders, processors with the aim of developing a strong value chain that grows rapidly, improve competitiveness and value added for its members and consumers. Each VCDA might receive an initial grant from the Government to start operations. The VCDA should closely link with the CAA in order to apply for funds available from the CAF or other government programs.

Bottom-up Approach in linking farmers to a value chain

Working with value chain actors will require a bottom-up approach. At the district level, the effort of linking actors in a value chain can start from successful farmer groups or enterprises involved in linking producers to the market. The key factor in this process would be to identify local entrepreneurs working with farmers. A local entrepreneur could be a dynamic farmer, a business person, or a social entrepreneur. With the help of outside human resources available in the district on in the state, the next step consists in linking these actors with other similar actors so that together they can expand the value chain. Next link these actors with service providers. Then link these actors with medium or large enterprises, if scaling up is envisaged. Incentive: throughout the process provide information on market intelligence available, conduct training and capacity building, and facilitate access to existing programs.

⁵ We define value chain as organized linkages among groups of producers, traders, processors, and service providers who join together in order to improve productivity and value added. By joining together, the actors in a value chain increase competitiveness and are better able to maintain competitiveness through innovation. The limitations of each single actor in the chain are overcome by establishing synergies and governance rules aimed at producing higher value and distributing value among the actors.

3.5 VALUE CHAIN INFRASTRUCTURE

49. Improvement in market and value chain infrastructure should keep into account the envisaged export orientation of horticultural sector in Bihar. While most market infrastructure will be established to meet the local and urban demand, a considerable part of the value chain infrastructure (collection centers, packhouses, CA storage, etc) will be located in rural areas and oriented to final destinations outside the state. Over time, terminal markets might emerge in the state, but evacuation of horticultural products from the state to outside of the state requires well-functioning value chain infrastructure.

50. This leaves open the question of what needs to be done in order to improve **APMC market yards**, particularly for the horticultural sector. Upgrading of existing infrastructure or investment in new infrastructure and facilities will require both public and private investment. In order to ensure upgrading of the fruit and vegetable urban markets one part of the market yard could be allocated for PPP infrastructure development. This will not be inconsistent with the overall policy of using another part of the market yards to establish warehouses, primarily for foodgrains. In addition to the DOA/H, the relevant CAA and VCDA might be involved in the identification of the land suitable for improvement of fruit and vegetables market infrastructure inside the urban APMC market yards.

51. If, however, the private sector is not allowed to build infrastructure in the existing APMC market yards, then appropriate incentives (in the way of VGF) should be provided for the establishment of private markets. Without such an incentive and given the exorbitant prices of urban land in Bihar, **private markets are likely to emerge** only in rural areas of peri-urban areas.

52. **Rural haat market infrastructure.** The District DOA/H in coordination with the CAA will establish the rural haat that requires upgrading of market infrastructure and allocate funds for its improvement. The upgrading can be done either in public sector or PPP mode.

53. **Village level market infrastructure.** This initially could be done according to the needs identified in VCDA to ensure that the market infrastructure responds to identified market needs. The investment could be either in private sector (if land belongs to private) or PPP mode (if the land belongs to the state).

3.6 MARKET INFORMATION AND INTELLIGENCE

54. A number of initiatives to collect and disseminate relevant market information could be established through use of ICT, including SMS-based technologies through which farmers are immediately connected to the market and know the prices, the buyers, and the requirements in each market. Additional information relevant to planning of production and marketing (eg weather, crop forecast, events) could be disseminated through ICT systems. A unit for market information and intelligence might be established within the BADF. Key information will include other markets in India and markets overseas and exports. Profile of various commodities will be made available to the public in various forms (publications, website, telecenters, ...)

3.7 INNOVATION FUND

55. Competitiveness is a dynamic concept. In order to be sustained over time, competitiveness requires innovation. Innovation can apply to products, processes, or functions. The key point is that innovation should occur at all stages of the value chains – inputs, production, postharvest, processing, marketing, logistics, finance. Innovation can occur spontaneously or through a process of imitation. However, the Agricultural Marketing Policy can nurture and promote innovation by

establishing an **Innovation Fund**, which is a matching grant fund whereby innovative enterprises and value chain arrangements can be provided a grant to carry out an innovative project. In fact, this also is a subsidy. But differently from other types of subsidies with all the problems we have mentioned in para 31, the Innovation Fund is a subsidy that promotes positive change and could results in higher productivity and competitiveness. The allocation of funds should be done in a transparent way and should involve CAAs and VCDAs. Performance of the groups and enterprises that have been rewarded by the Innovation Fund should be monitored and disseminated.

3.8 RESEARCH-EDUCATION-EXTENSION (REE) INTEGRATION

56. The Agricultural Roadmap discusses research, education, and extension; however, experience shows that the three institutions often operate independently rather than synergistically. From the point of view of marketing policy for horticultural products, considerable integration is needed among REE institutions. However, the technologies dissemination and adoption requires not only the input of professionals (researchers, teachers, extensionists) but also structured dialogue with farmers and enterprises. This dialogue could be considerably enhanced through mechanisms such as the CAA and VCDA. Furthermore linkages with international research organizations and private sector could further contribute to a culture of innovation. The BADF will also promote coordinate of the REE institutions at the state level.

3.9 CAPACITY BUILDING

57. A well structured program in capacity building in marketing and value chain development should be organized for government officers (DDA/H, ATMA) and value chain actors (farmer representatives, lead farmers, cooperatives, companies, financial institutions). The capacity buildings should include training courses, workshops, study tours, exposure visits, audiovisuals material, and sharing of experiences through workshops, conferences, and periodic gatherings. SME capacity building offered by BDS providers (eg writing business plans and keeping accounting books) could be adapted to the horticultural sector and targeted to farmer groups and VCDAs.

58. Particularly important will be the capacity building in marketing and value chain development as these two areas either are not usually present in the professional background of extension workers or they are completely new to most farmers and other value chain actors (traders, processors, logistics agents, finance providers).

3.10 MONITORING AND EVALUATION AND REWARDS SYSTEM

59. The absence of an effective monitoring and evaluation systems has three major consequences. First poor performance and problems cannot be detected on time and therefore it is difficult to improve implementation of policies and programs through remedial actions. Second, impact of policies and programs cannot be assessed properly so it is not possible to evaluate if similar programs should be replicated or discontinued. Third, cases of good performance are ignored and undetected; as such they will not have limited positive impacts, will not be replicated, and will negatively affect the motivation of the staff involved.

60. A number of indicators for agricultural marketing of the horticultural sector should be established. The indicators should go beyond the inputs, outputs, and expenditure; in fact they should track outcomes and impacts. Too often, monitoring systems restrict themselves to inputs and expenditures.

Example:

Contractor company recruited (input) >> Collection center build (output) >> Money spent (expenditures)>> Turnover increased (outcome) >> Farmer's income increased (impact)

61. A fundamental step to improve effectiveness of implementation will be to start establishing a link between performance and rewards. Performing staff should be rewarded. But performance has to be assessed properly.

3.11 DEMAND-DRIVEN EXTENSION

62. A marketing perspective (i.e. customer oriented) should be part of the overall marketing policy, including the delivery of extension services to farmers. Rather than guessing the needs of farmers involved in value chain development and organizing appropriate extension services to meet those needs, the approach might be put on its head. Namely provide farmers with “**extension coupons**” that the farmers can spend as they wish to have extension services delivered to them. Different providers (both state and private, academic, and NGOs) could compete for providing extension services to farmer groups. Farmer groups can shop around for the best services. If they are interested they could complement the vouchers with their own money. A number of providers will be certified by ATMA.

3.12 ORGANIZED RETAIL IN HORTICULTURAL PRODUCTS

63. A number of corporates (eg Reliance Fresh) and cooperatives (eg Saifal) have tried a more organized retail system for horticultural products in India. Although some of these trials are not fully successful and still primarily directed to affluent urban consumers, agricultural marketing policy should see the trends positively and encourage the integration of farmer groups with modern retail. This will have several benefits in terms of marketing: improvement in quality, establishment of long-term contracts, and push for effective organization of farmers.

Box on Coops in Indonesia – farmer groups integrating with modern retail

3.13 FUNDING

64. The overall funding for marketing activities in the horticultural sector should be determined so that the effectiveness could be evaluated over time. Some funding will be utilized as VGF. It is suggested that matching grant also be used and implemented through CAA mechanisms indicated earlier. VGF related to programs for improving cold storage and processing capacity and market infrastructure may be used as intended already. Matching grants could be more appropriate to meet the local needs of communities and farmer groups for appropriate market and value chain infrastructure.