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Need to Strengthen Market Strategy of Timber Products in Eastern Uttar Pradesh

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A B S T R A C T

The state of Uttar Pradesh is deficient in forests and as such to fulfill the demand of wood and firewood from forest itself is difficult. The gap between demand and supply of these wood products can be maintained by increasing agro forestry in the region. In Eastern part of U. P., status of agro forestry is in very early stage. Due to lack of knowledge and unawareness about the concepts, people have not adopted agro forestry up to a remarkable extent. The gap between demand and supply of forestry products is being tried to bridge up by increased emphasis on afforesation programmes. Thus, daily needs of rural people of this region are fulfilled by adjacent forest of the area and local market. The farmers engaged in farm forestry, agro forestry and social forestry suffer a lot due to non-availability of adequate market of different forest species in different parts of the country. Bamboo growers suffer a lot due to non-availability of paper and pulp industry in Eastern U. P. The absence of industries affects adversely the plantations of important tree species specifically, the plantation of Poplar, Semal, Kadamb etc. and non-availability of market information system of important timber species, their up to date rates and traders associated with business of rural as well as urban areas with the grower affects adversely the cultivation of the species. Thus, stream lining of existing marketing channel for local farmers/ villagers for sale of important tree products, viz. timber and firewood will be of paramount importance for developing agro forestry in the areas. Thus, existing market information of important agro forestry species as Teak, Shisham, Eucalyptus , Neem, Mahua, Jamun, Kathal, Babool, Mango & Poplar for their traders, demand and fluctuations in sale and purchase rates and marketable tree produce of tree growers has been studied in districts of Allahabad, Sonbhadra, Gorakhpur, Behraich, Raebareli and Barabanki lying under different agro-climatic zones of Eastern UP. The extension works/ training programmes were carried out in selected districts for strengthening the existing market linkages to different stakeholders.

Keywords: Market information, tree species, timber products, stakeholders, agro forestry

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1. Introduction

After creation of Uttaranchal state in the year 2000, the tree cover in Uttar Pradesh has reduced to only 5.96% (FSI, 2013) whereas the State Forest Policy 1998 envisaged that one third of the total geographical area should come under forest/tree cover. Hence, agro forestry is now the only option to increase the desired tree cover of 33%. In Uttar Pradesh, practices of agro forestry vary considerably according to the agro climatic zones, socio-economic conditions and site-specific tree species (Prasad, 2003). In Eastern Uttar Pradesh, the forest cover is negligible and mostly in the form of small wood lots and plantations. This forest cover in the state is mainly confined to the Tarai and Vindhyan regions. In this region, due to population explosion, illiteracy, poverty and urbanization, the scope of increase in forest area is very limited. However, the vegetation cover may be increased by adopting social forestry, particularly the agro forestry. Majority of the farmers in the study area are marginal and largely depend on market for their day to day needs of wood (timber and fire wood). The farmers engaged in farm forestry, agro forestry and social forestry suffer a lot due to non-availability of adequate market of different forest species, their up to date rates and traders associated with business of rural as well as urban areas.

Kumar *et al.* (2011) compared the status of agro forestry in eastern and western UP. Planting trees outside forests will be an additional source of raising forest cover. However, there is large disparity within the farmer communities for tree planting at their farm at regional scale. This study has addressed the issue of adaption of tree planting in two regions of UP for comparision. The agro forestry market is a place where buyers and sellers transact forest (timber and non-timber) products, agricultural and livestock products at a particular place and time. The classification of agroforestry markets are based on area, time, commodities, volume and competition dimensions such as local or village markets, regional markets, national markets & world market (based on area); short & long-period markets (based on time span); common markets, specialized markets (based on commodities); whole sale markets, retail markets (based on volume of transaction); perfect and imperfect markets (based on competition). The major participants in the markets are producers, traders, industry, government and consumers (Raj et al. 2014).

At present to explore agro forestry in the region, there exists a situation where some suppliers and some users of timber and timber products may not be aware of each other's existence. In some cases, timber producers are complaining of low demand for their products while some users are complaining of lack of raw material supply. The study finds solutions to the information gap by identifying bottlenecks and other problems in the flow of timber markets from their sources to end-users. Thus, stream lining of existing marketing channel for local farmers/ villagers for sale of important tree products, viz. timber and firewood will be of paramount importance for developing agro forestry in the areas.

2. Materials and Methods

The important tree species of timber and fire-wood value were screened which are also important for farmers, viz. *Dalbergia sissoo (* Shisham *), Madhuca indica* (Mahua) , *Syzygium cumunii* (Jamun), *Tectona grandis* (Sagaun *), Acacia nilotica* (Babool*), Mangifera indica (*Mango*), Azadirachta indica (*Neem *), Eucalyptus hybrid (*Eucalyptus), *Poplar deltoids* (Poplar) and *Artocarpus heterophyllus (*Kathal) for the study. The districts were selected from three agro-climatic zones lying under eastern UP - Gorakhpur, and Bahraich from tarai region , Raebareli and Barabanki from Eastern gangetic plains and Allahabad and Sonbhadra from Vindhyan region after consultation with forest department. The list of tehsils, blocks and villages were also collected from population census records (2011) of U.P., Lucknow. Preparation of questionnaire has been done to study the existing timber traders for marketing mechanism, rates of wood, quantity of timber, role of middle men, market cost, profit margin of seller, rates of forest corporation, database of contractors, sawmillers, wood markets, plywood/veneer industries and existing farmers involved in agro forestry.

After the field-testing of questionnaire, the necessary changes were added and the data sheets were remade for collecting information from the study sites for socio-economic profile and tree details. One representative village has been selected from each block for collection of data. The villagers were assembled in a place as primary school, temple, panchayat etc. and they were asked questions regarding the selected trees which are existing in their villages especially on farm bunds, village road side, pond side and other locations too. The survey team studied different market places as sawmills, wood industries, plywood /veneer units, furniture markets, contractors/ middlemen for timber market mechanism, existing rates, species wise volume of timber at different market places, variation in rates etc. The extension programmes were conducted in study area of selected districts for farmers, timber traders and UPSFD. Pamphlets were prepared for summarized research findings and these were distributed to farmers and UPSFD under extension works.

3. Results and Discussion

In Eastern UP, due to absence of an organized marketing system, the tree growers are not getting proper return of their product. In order to maintain sustainability of agroforestry, it is also essential to provide technical guidance to tree growers and keep them informed about alternate option. The main concern of the farmer is maximum return per unit area.

Marketing of farm forestry produce is very complex in nature. In the region of Eastern UP, the market availability is very poor, and the existing ones are highly unregulated and imperfect. The farmers are generally not much aware about the various sizes, quality of logs and different ways in which the wood is being utilized. They are totally ignorant about their economic gains from wood produces. The contractors / middlemen are involved in the marketing channel of timber and are gaining a very good share in the deal. In the region of eastern UP, the channel begins at farmer's land where wood is produced. For selling of wood in the timber market, village level contractor/ middlemen/ commission agents are more often involved in the process. To study the markets of agroforestry tree produces, the market places of selected six districts were surveyed in respect of tree species, their demand supply position, prevailing market rates and wood arrival at main market places.

The results for all the six districts were summarized and comparisons were made for assessing a trend for the region. The timber trade mechanism in all six districts was compared and found that contractor is an important chain in the timber trade mechanism. Majority of the farmers are trading their wood through contractor to avail all formalities/processing of the sale. The sawmills, local wood mandis and plywood veneer industries for some species are common market places for farmers of the region. The Eucalyptus and Poplar are marketable in those area where plywood and veneer industries exist well. Table 1 depicts a clear picture about status of existing market places in the region. On an average , ninety one sawmills, six veneer and three plywood industries exist in the region which are very less as per the demand of market .

The level of timber market uses was compared in all six districts and found that on an average, 37 % timber is used in door/window works, 30 % in furniture, 18 % in plywood/veneer, 05 % in packing boxes industry and rest 10 % in other uses as firewood etc (Table2). The maximum wood come to market places through contractors (56%). The direct sale of farmers at market is very less (Table 3). The wood arrival at different market places was analyzed and found that Eucalyptus consumption is good in Gorakhpur, Behraich, Raebareli and Allahabad districts. The use of Mango and Shisham is highest in Allahabad followed by Gorakhur and Bahraich districts. On an average, highest consumption of wood is of Eucalyptus followed by Mango and Shisham (Table 4 & Fig 1).

General observations about timber markets in Eastern UP:

The Sawmillers purchase timber from forest corporation through auction. The availability of Poplars is almost negligible in Sonbhadra district. Eucalyptus plantations are available in plenty at Allahabad district but due to unavailability of markets and industries, most of the raw material is used in construction of houses, fencing etc. Timber is also supplied in bulk from Behraich and Gonda (Private trees of farmers and forest corporation auction)districts. The market value is Rs. 1500 -2000 per tree for ten yr old matured tree of Eucalyptus. It is used in construction of houses as Fanti. Approx. 04 qt. wood comes out from this tree.

The occurrence of Babool tree is negligible in the area due to frost and fog of winters. In Allahabad, Eucalyptus is mainly used in Balli and Phanti for construction purposes. In Karchchana range, it is much used in packing boxes industries. Due to poor irrigation facilities, farmers are not planting more trees. Eucalyptus is lowering the water level of the land, thus, farmers do not prefer this species in Allahabad. In Raebareli, farmers are planting eucalyptus on tree bunds of usar land. In district Raebareli a number of veneer /plywood industries are existing.

In these industries only 60-65 % raw material is available as per demand. In Laganj range, despite of presence of plenty of eucalyptus trees, growers are not aware about their industrial uses. Thus, knowledge about source of market places may strengthen market channels of this area. Likewise, in district Allahabad, eucalyptus trees are sold at very low rates in building construction work for phanti and balli etc. As this species is free for permit, it can be easily transported to adjacent Raebareli district for industrial consumption, but only some middlemen are involved in this practice.

The common farmers are unable to get the benefit. Thus, through the data base of traders of Raebareli, information about traders of Raebareli will be well distributed to the growers of adjacent area so as to promote the market channels. In Bahraich, poor land holding is a major constraint for tree growers as their awareness is comparatively better than other sites. The availability of seedlings in forest department nursery is also very less as per their requirements. In some villages, poor knowledge about plantation techniques is also a hurdle in the way to success. The villages adjacent to forest fulfil their tree based needs by forest produce for wood as well as NWFPs. The lack of sufficient support to farmers by gram pradhans /forest officials is another constraint for tree growers. The farmers are not fully aware of tree felling and transit rules of trees and are harassed by police and forest department.

Method of timber trade (purchase or sale) mechanism

1. Farmer → Contractor → Commission agent →Timber Trader → End user
2. Farmer → Consumer
3. Farmer → Contractor → Timber Trader
4. Farmer → Contractor → End user
5. Farmer → Timber trader/ carpenter → End user
6. Farmer → Contractor → Commission agent → End user
7. Farmer → Commission agent → End user
8. Van Nigam→ Contractor →Timber trader →End user
9. Van Nigam→ Timber trader →End user
10. Farmer→ Contractor →Timber trader →End user
11. Farmer→ Timber trader→ End user

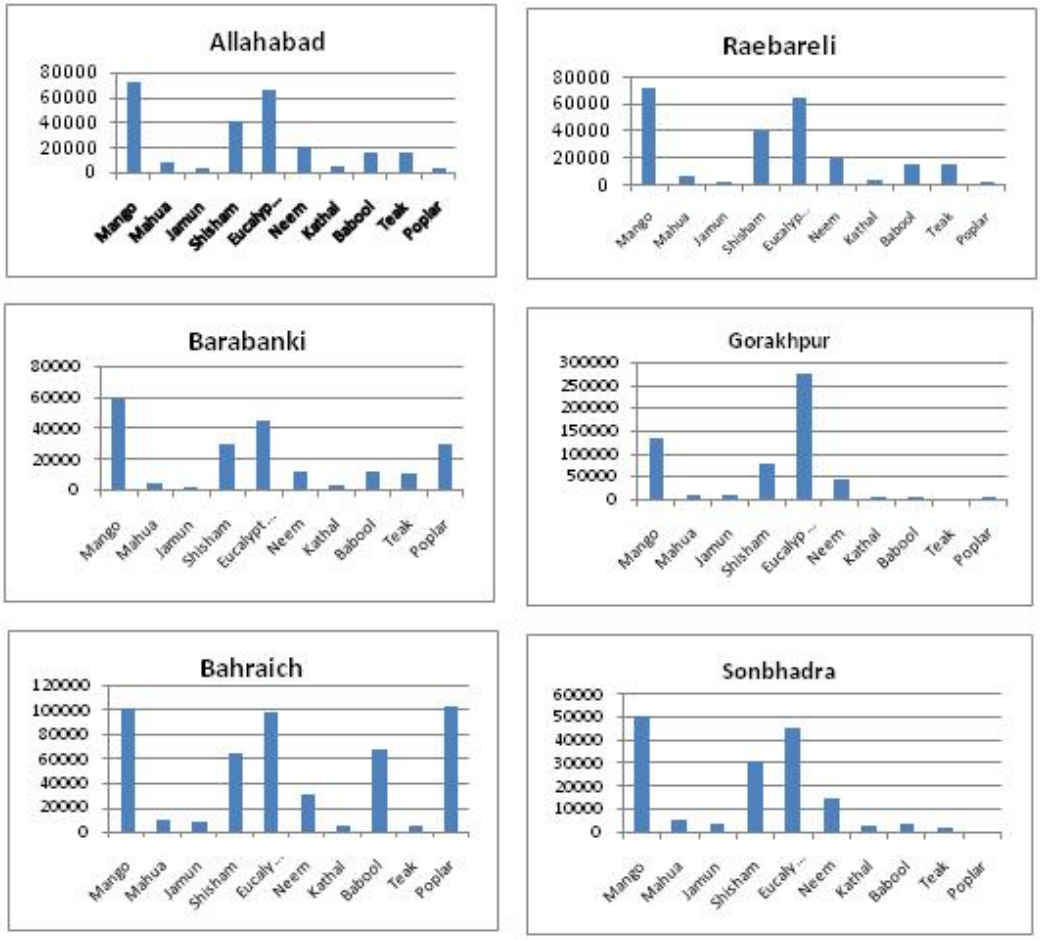

Figure1: Arrival of timber of different species at wood consuming units (cft/yr)

Table 1: Units of wood based Industries in selected districts of UP

S. No	Wood based Industries	No. of Units in selected districts						
		Gorakhpur	Raebareli	Allahabad	Barabanki	Bahraich	Sonbhadra	Average
1.	Saw Mill	208	83	79	104	56	16	91
2.	Veneer	5	22	0	4	3	0	6
3.	Plywood	5	8	0	4	1	0	3
4.	Packing box industry	0	0	01	0	0	0	<1

Table 2: Level of timber market uses

S. No	Market Particulars	Level in %						
		Allahabad	Raebareli	Barabanki	Gorakhpur	Behraich	Sonbhadra	Average
1	Door / window	45	30	35	25	30	50	37
2	Furniture	35	10	40	40	25	30	30
3	Packing Industry	10	5	5	0	10	0	5
5	Plywood/veneer	0	40	10	25	30	0	18
6	Others	10	15	5	10	5	15	10

Table 3: Source of timber at sawmills in study area

Timber source	Quantity (%) in selected districts						
	Allahabad	Raebareli	Barabanki	Gorakhpur	Behraich	Sonbhadra	Average
Directly by farmers	20	12	18	12	12	12	14
Through contractors	60	70	60	42	50	35	53
Bordering district/state/ foreign countries	10	08	12	10	21	15	13
Forest corporation	05	08	06	35	15	35	17
Any other	05	02	04	01	02	03	03

Table 4: Approx. quantity of wood per annum arrived at saw mills/ wood units

Species	Approx quantity arrived per annum (cfts						
	Allahabad	**Raebareli**	**Barabanki**	**Gorakhpur**	**Behraich**	**Sonbhadra**	**Average**
Mango	150754	72390	60310	133896	102300	50800	95075
Mahua	15670	7560	5560	10800	10230	5020	9140
Jamun	6750	3250	2560	11898	7600	3440	5916
Shisham	87680	40350	30300	76481	65200	30680	55115
Eucalyptus	67220	65670	45600	275000	99560	45600	99775
Neem	40568	20120	13165	43824	30985	14490	27192
Kathal	7853	4590	3190	4918	5467	2400	4736
Babool	10764	15322	12300	6898	67877	3210	19395
Teak	3560	16280	11270	1571	4560	1510	6459
Poplar	1450	2800	30500	5039	104550	0	24056
Total	392269	248332	214755	570325	498329	157150	346859

Training and Demonstration

The demonstration carried out under the project played a significant role in educating people regarding selection of species in plantation programmes and information regarding availability of timber markets in the region. The day to day needs of people are dependent mostly on trees. Thus, availability of tree based products at their own will further strengthen their economic level. The results of all six districts had been summarized in the form of pamphlet/ handout for each district. The extension-cum-training programme was conducted in selected villages of districts. The pamphlets were also circulated to the concerned forest department of districts.

The extension activities carried out under the project will be helpful for channelizing timber markets for adequate economic returns to the people and selection of suitable species in plantation programmes by the end users, thus, promoting agro forestry in the region. Complexity of the system for tree growers to sell the produce directly to traders as getting felling and transit permit, contractor/ middlemen, felling loading/unloading, transportation etc are major hurdles in the way to success. Logs of wood are rejected many times due to poor quality and these are sold in the market at very low rates compared to their actual cost. In wood-mandis, market is dominated by buyers as for sellers there is no provision of storage of wood. The commission agent and buyer get united during auction of wood. Poor availability of planting material and land availability are important reasons for tree growers for not adopting agroforestry.

Figure 1: Training and extension programme in Allahabad and Gorakhpur districts

In U.P, Forest Corporation entered into the market to purchase standing eucalyptus trees of the farmers with declared support price (diameter wise). In the beginning the corporation did get large quantity of eucalyptus timber especially in western U.P. the local contractors who were exploiting the farmers by way of offering ridiculously low prices of standing trees started feeling themselves to be outside the market. The farmers even started bargaining with the contractors with the result that they even got more prices than what was offered by the corporation. The corporation successively revised the support price of not only eucalyptus but also for poplar, khair and shisham (Gaur and Sarkar, 2001).

The markets for agroforestry products are not effectively organized in the ground reality. Mostly traders and middlemen are the big player in the market, where as producers are simple price followers due to low producers' share in consumers' rupee. In order to develop well organized and efficient supply chain for agroforestry products, a proper linkage among all stake holders with assured buyback system under perfect competition will eliminate the intervention of middlemen and fetches better net farm income. This is will augment the supply of raw materials to agroforestry based industries on a sustainable basis to promote better household and national economy. The pressure on traditional forest resources will be reduced by promoting tree cover and production oriented different

agroforestry models at farm levels will be adopted at both extensively and intensively (Raj et al. 2014).

4. Conclusion

The most preferred and prospecting species of agroforestry are Eucalyptus, Poplar, Teak and Shisham. The plantation of deficit species of the region should be taken on priority basis so as to maintain the sustainability and fulfilling the requirement of wood based industries. The decentralized wood mandis should be organized and registered. The awareness of people should be regularly increased through extension and training programmes. The model demonstration of agroforestry species should be established in the villages for promoting plantation of species in the region.

The existing market information should be disseminated well among tree growers/farmers and new avenues for market places as wood based industries should be initiated at planned level by the government. The felling and transportation rules for timber species simplified under the project should be well circulated to the common people so as to increase their awareness about tree felling and transit rules. The species like Eucalyptus and Poplar which are exempted from felling permit are not much known to the farmers of the region. So, increasing awareness of people is a must task for promotion of agroforestry in the region. The database of traders and grower information was disseminated to the tree growers and traders during extension programmes on a common platform. The sale of private trees through forest corporation should be well promoted by the government.

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