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Exotic Veggies: A Practical Utility of Innovation- Lured by the Easy Returns

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Abstract

Demand-driven exotic vegetables production is suitable for the farmers as they have assured market through contract with consumers. Exotic vegetables market is growing at the rate of 15 to 20% per annum is increasing day by day since India is importing more than 85% exotic vegetables. The innovative woman farmer is growing 25 vegetable varieties in 2.2 ha with an expenditure of Rs. 6250/day/ha and obtained earnings Rs. 8750/day/ha. Skilled labour is required for cultivation of these vegetables. Presently, a group of 100 farmers is cultivating these exotic vegetables from different villages in the vicinity. The present study focuses on Visakha Agency area is viable for producing exotic vegetables that are in high demand in foreign countries, including the United States, if a study carried out by horticultural scientists is to be believed. However, despite a naturally enabling environment for cultivating these high value veggies, the area unfortunately lacks proper export facilities and local marketing infrastructure. The people in India are now developing new test buds to accept new food items. Preparation of these food items need many exotic vegetables like Baby corn, Red cabbage, Broccoli, Colored bell pepper, lettuce, mushroom, Asparagus, Olives etc. some of which are imported from other countries. Due to huge supply chain, more demand and less supply these vegetables comes very costly in the Indian market.

Horticulture Research Station (HRS), at Chintapalli in Visakha Agency, conducted a study entitled "Study of suitability and development of cultivation practices for non-traditional high value vegetable crops under open conditions in high altitude conditions - crop production" under the Rashtriya Krishi Vikas Yojana (RKVY) scheme of the state government for the year 2012-13. What we observed as part of our study was that though Visakha Agency is most viable for producing these eight varieties of high value veggies, there are no buyers for the produce. We got a huge yield from our cultivation, but no wholesale or big vegetable traders showed interest in purchasing our products because of lack of awareness regarding the agency areas. All the crops have given a good yield without any use of pesticides and fungicides. In particular, broccoli, which is similar to cauliflower, is rich in antioxidants and can prevent cancer. Almost all varieties of the crops are in high demand in foreign countries and metros. If hyper markets like Reliance Fresh, Spencer's or More are ready to buy these veggies, Vizag Agency can not only help the cultivators reap good revenues but also indirectly generate livelihood for many unemployed people.

Keywords: Exotic vegetables, globalization, marketing infrastructure, minimal investment, green journalism.

Introduction

Growing of exotic vegetable & fruits is more profitable business than cultivation of traditional Indian vegetables. Globalization has brought many opportunities and changes in developing country like India. Some of the major changes along with the globalization are the changes in the living standards and living style among Indian people. Originally, vegetables were collected from the wild by hunter-gatherers and entered cultivation in several parts of the world, probably during the period 10,000 BC to 7,000 BC, when a new agricultural way of life developed. China is the largest producer of vegetables, and global trade in agricultural products allows consumers to purchase vegetables grown in faraway countries. The scale of production varies from subsistence farmers supplying the needs of their family for food, to agribusinesses with vast acres of single-product crops. Depending on the type of vegetable concerned, harvesting the crop is followed by grading, storing, processing and marketing. Vegetables can be eaten either raw or cooked and play an

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important role in human nutrition, being mostly low in fat and carbohydrates, but high in vitamins, minerals and fiber. Many governments encourage their citizens to consume plenty of fruit and vegetables, five or more portions a day often being recommended.

The most visible change which we can notice is the change in the food habits among the new generations. In India, such produce is "exotic". Until recently, none of these would have been cultivated here. High street restaurants imported everything - from salad leaves to European vegetables - to dazzle well-heeled customers who paid handsomely for their Arugula and Baby Radish Salad or the Heirloom Tomato (non-hybrid tomato whose seeds are typically passed down generations) Bruschetta. Domestic production of exotic vegetables, however, has been growing at a fast clip over the last three years. Farms catering to exotic greens have mushroomed too - in Manesar, Haryana (near Delhi), Pune, Bangalore, and Mysore. Their clientele are mostly restaurants in five-star hotels. Some of the produce is finding their way into retail shops as well. Visakha Agency area is viable for producing exotic vegetables that are in high demand in foreign countries, including the United States, if a study carried out by horticultural scientists is to be believed. However, despite a naturally enabling environment for cultivating these high value veggies, the area unfortunately lacks proper export facilities and local marketing infrastructure.

Horticulture Research Station (HRS), a unit of YS Rajasekhara Reddy Horticulture University at Chintapalli in Visakha Agency, conducted a study entitled "Study of suitability and development of cultivation practices for non-traditional high value vegetable crops under open conditions in high altitude conditions - crop production" under the Rashtriya Krishi Vikas Yojana (RKVY) scheme of the state government for the year 2012-13.

Good Yield with Minimal Investment

Cabbage is variety, whose terminal bud consists of enlarged leaves in a tight mass (a head of cabbage). Brussels sprouts are lateral buds, which appear as miniature tight forms of cabbage, and kohlrabi are the enlarged stems. Broccoli and cauliflower are inflorescences, which are clusters of flower buds atop a stem. As part of the study, the HRS produced nearly 2,000 kg of eight varieties of veggies such as sprouting broccoli, brussels sprouts, red cabbage, Chinese cabbage or pakchoi, knolkhol or kohlrabi, turnip and palak over nearly 2000 square yards at Chintapalli in the winter season starting November 2013 to January 2014. The scientists spent nearly Rs. 20,000 on cultivating the crops and studying the pros and cons of the products as well as the agency in order to help the government as well as interested vegetable cultivators.



Knolkhol



Broccoli



Brussels sprouts

Palak

Broccoli: *Brassica oleracea* Insect-pollinated, biennial broccoli will cross, and must be isolated from, all other members of *B. oleracea* by one mile for reliable distance isolation. Since broccoli plants are mostly self-infertile, they should be planted in groups of at least 10 or more plants to maintain a decent genetic base and seed viability. Harvest central heads and some secondary shoots for eating, then leave a healthy side shoot or two on each plant to overwinter and flower for seeds. Harvest seed pods *before* the pods split open naturally, but *after* they have fully matured and dried on the stalks—the seeds will not continue ripening after the plants or stems are cut. Finish drying upside-down in paper bags or hanging in bundles over a tarp. When the plants are completely dry, any seeds that haven't naturally fallen out of their seed pods are easily removed by crumbling the pods. Broccoli seeds will last for 5 years if properly stored.

isolation. Brussels sprouts are mostly self-infertile, so seed should be taken from groupings of *at least* 10 or more plants. A few sprout heads can be left on each plant to overwinter and flower, so the same plants can produce both sprouts for eating *and* seeds. Like other members of the Cabbage Family, seed pods must mature and dry *on the plant* before harvesting. The pods open readily once they've dried, however, so don't tarry after seed pods are dry. Seeds of Brussels sprouts will keep for 4 years if properly stored. See also Cabbage Family.

Brussels: Sprouts *Brassica oleracea* Insect-pollinated, biennial Brussels sprouts must be kept isolated from all other members of *B. oleracea* by one mile for reliable distance

Cabbage: *Brassica oleracea* Insect-pollinated, biennial cabbage must be kept isolated from all other members of *B. oleracea* (see list under Cabbage Family) by one mile. Since cabbages are mostly self-infertile, they should be planted in groups of at least 10 or more plants. Kohlrabi (German turnip or turnip cabbage; *Brassica oleracea* *Gongylodes* Group) is an annual vegetable, and is a low, stout cultivar of cabbage. Kohlrabi can be eaten raw as well as cooked.



Red Cabbage



Cauliflower



Turnip



Chinese Cabbage

Spinach: (*Spinacia oleracea*) is an edible flowering plant in the family Amaranthaceae native to central and western Asia. It is an annual plant (rarely biennial), which grows up to 30 cm tall. Spinach may survive over winter in temperate regions.

Chinese cabbage: (*Brassica rapa*, sub species *pekinensis* and *chinensis*) can refer to two groups of Chinese leaf vegetables often used in Chinese cuisine: the Pekinensis Group (napa cabbage) and the Chinensis Group (bokchoy). These vegetables are both variant cultivars and subspecies of the turnip and belong to the same genus as such Western staples as cabbage, broccoli, and cauliflower.

Turnip: Turnip or white turnip (*Brassica rapa* subsp. *rapa*) is a root vegetable commonly grown in temperate climates worldwide for its white, bulbous taproot. Small, tender varieties are grown for human consumption, while larger varieties are grown as feed for livestock. Each and every veggie has their own nutritional benefits. If these vegetables are marketed well then it is a source of income for the people who are from agency areas and have a sustainable livelihood. The research scientists succeed in getting a good yield with minimal investment and observed that the Visakha Agency was viable for producing such crops, but found no marketers to buy the product from the Agency area though these crops have a huge demand in metro cities like New Delhi, Mumbai, Hyderabad, Bangalore and even Visakhapatnam city, apart from foreign countries like the US.

Can these vegetables grow in India?

Now the question lies, Can these vegetables grow in India? Some parts in India have a great potential to cultivate these exotic vegetables. Baby corn cultivation has gained popularity as valued vegetable in Delhi, U.P, Haryana, Maharashtra, Karnataka, A.P and Meghalaya.

Cost of production in high technology Green house will lead to again high cost of cultivation, low cost polyhouse can be a suitable alternative of it. These vegetables are highly susceptible to diseases and pest hence they needs immense care while cultivation. These vegetables can be grown in a vast area in cool climatic conditions of weather. The cultivation of exotic vegetables has started picking up in Himachal Pradesh with farmers opting for diversification in agriculture. Making the most of climatic and soil conditions of the region, farmers have taken to growing exotic vegetables like asparagus, broccoli etc. Cultivation of exotic vegetables in Pune district, which had seen an upward trend a few years back, seems to have failed to take off for want of markets. Farmers who had taken up cultivation of avocado, broccoli and other exotic vegetables, have gone back to normal vegetables.

A Practical Guide to Productive Findings

"What we observed as part of our study was that though Visakha Agency is most viable for producing these eight varieties of high value veggies, there are no buyers for the produce. We got a huge yield from our cultivation, but no wholesale or big vegetable traders showed interest in purchasing our products. The main reason behind Visakha Agency being ideal for cultivating such crops is suitable climatic conditions as all these crops can grow only in chilly weather conditions where the night time temperature is

always below 10 degree Celsius and Visakha Agency enjoys such temperature, mostly in winter.

The F1 Hybrid seeds for the study were either imported from private vendors or procured from Indian Agriculture Research Institute at Katrain in Himachal Pradesh. The seeds were sown in September 30 last year, seedlings planted on November 1, and the yields procured during last December and this January.

"If hyper markets like Reliance Fresh, Spencer's or More are ready to buy these veggies, Vizag Agency can not only help the cultivators reap good revenues but also indirectly generate livelihood for many unemployed people. All these eight veggies are best for exports, mostly to the US," adding that the study was first of its kind in Andhra Pradesh. "If the government puts in place good marketing facilities to market these vegetables, we are sure that the Agency will become a hub for producing huge quantities of such exotic vegetables that enjoy a good demand in the urban areas and export markets.

According to officials at hypermarkets, while broccoli is priced at about Rs 150 per kg, red cabbage is sold at Rs 70 per kg, knolkhol is about Rs 40 per kg and pakchoi at Rs 17 per piece. "Currently, broccoli is hardly available in hypermarkets in the city with most of these vegetables being imported from Bangalore," said an executive with a hypermarket.

Vision for the Future

Preserving the fertility of mother earth and protecting the environment are the most laudable objectives of our times. It is well known that excessive use of organo-phosphorous pesticides and chemical fertilizers, not only depletes soil fertility but also affects human health and Nature's Eco Balance. The exotic vegetables are low in calories and rich in nutrients, making them very popular with people metros and even with locals. But some of these leafy vegetables are perishable and need quick transportation which becomes an obstacle for farmers. "Given these constraints, the cultivation of some of the exotic vegetables has great scope and has picked up very well with farmers.

Quality seed is the first crucial step; its suitability to the location and its quality play a major role in crop productivity. Though serving very limited number of farmers initially, now with hard work and rapport with the farming community, the number may reach to more farmers, covering approximately 10 villages nearby. Employment opportunities have been created, who are independently extending services in farming. Impact of extension initiatives resulted in increased quality, productivity and improved economic status of the rural people who are below the poverty line. It is a source of income for them. Self-employment by women Agripreneurs is a challenging task to be successful, we should be determined and put in tremendous effort to maintain equilibrium between our famers and business.

Green Journalism in Rural Areas

Electronic media is playing a very important role in dissemination of agricultural information; it is reaching a wide range of audience at a very fast rate; it serves as a veritable instrument not only for information dissemination but also for stimulating farmers' interest in new ideas and practices in agriculture." The concept of Digital Agri Media is to educate the farming community with the help of e-literature i.e. Agri Media Films, mass media support to

organizations working with the Agriculture sector. Till date, we have not taken any loans/subsidy/financial support from any one. All this is happening by way of the mutual support of the farming community, my firm and other Agricultural organizations.

As on today, Digital Agri Media services has reached 50,000 villages and benefited 3,65,000 farmers. The firm is having an annual turnover of Rs.1.20 Crore and has 7 skilled people hired on their pay roll. The future vision of the firm is to tie up with GOI, GOG, SAUs, NGOs and private companies in strengthening E-extension and E- literature to bring the latest hi-tech information on agriculture to the doorstep of the farming community.

Conclusion

Growing and harvesting one's own vegetables is one of the most satisfying gardening experiences. People are also waking up to the benefits of eating farm fresh and chemical-free food. It is well known that vegetables are an essential component of traditional foods. It is important that the quantity and quality of vegetables used should be of the highest possible standard. Based on the evidence gathered from the studies of contemporary health experts, there appears to be a general trend that suggests a role for phytochemical from vegetables in protecting human health from several types of chronic diseases. Though large number of studies have proved that health benefits of a specific phytochemical, the benefit cannot be attributed to one component or even to one vegetable but of different types of vegetables year-round enables the consumers.

Exotic vegetables market is growing at the rate of 15 to 20% per annum and is increasing day by day. India is importing more than 85% exotic vegetables. Exotic vegetable has major two niche market hotel industry and export. Growing of exotic vegetable & fruits is more profitable business than cultivation of traditional Indian vegetables. Demand-driven exotic vegetables production is suitable for the farmers as they have assured market through contract with consumers. Exotic vegetables market is growing at the rate of 15 to 20% per annum is increasing day by day since India is importing more than 85% exotic vegetables. The innovative woman farmer is growing 25 vegetable varieties in 2.2 ha with an expenditure of Rs 6250/day/ha and obtained earning Rs. 8750/day/ha. Skilled labour is required for cultivation of these vegetables. Presently, a group of 100 farmers is cultivating these exotic vegetables from different villages in the vicinity.

The peri-urban agriculture with exotic vegetables by designing courses at school, college and university level so that available technologies are widely disseminated. Such efforts to develop skilled manpower would be able to take up the challenge of safer food production in future. Campaigning awareness programmes and sensitizing people for wastes and water recycling for crop production. There is need to create community-based infrastructure to facilitate on how crops are grown, and how are reached to the consumer. The aim is to generate employment in agency areas and have a sustainable livelihood.

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