



Secondary Agriculture adds high value, creates jobs, reduces pollution, improves farm economies rapidly, builds rural agro-industries, increases international trades, adds quality to life of rural population.

Secondary Agriculture

ENSURING FARMER PROSPERITY



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Indian Agriculture has reached an era of surplus in most of the agricultural commodities. The focus continues to be on raw produce. Despite various schemes, incentives and support programs, the farmers, especially small and marginal, are not generating enough returns from agriculture for a decent livelihood. The returns from agriculture sector are declining overtime.

Therefore, the youth is not inclined to continue in agriculture profession. The challenge is to make agriculture profitable and attractive. One possible way is to add value in agricultural commodities through processing, packaging and branding of main commodities as food items. The other is making high value products of crop/commodities' residues to nonfood items like cosmetics, pharmaceutical, nutraceutical and industrial use items to augment farmers' income.

Focus On Main Produce

The existing agricultural production system yields many raw materials, but focus remains primarily on main produce such as grains, fruits, vegetables, milk, etc. Byproducts such as rice/wheat straw, peels/seeds of fruits and vegetables, are not considered remunerative products and disposed at a very low price or thrown in many cases.

Research on properties and elemental analysis (tertiary and quaternary level processing) of these byproducts has shown that there are many compounds in them which have high value in pharmaceutical, nutraceutical, cosmetic, food and other chemical industries. Their effective utilization would not only substitute import, but also offer a great potential for export and earn foreign exchange.

These very high-value products would fetch manifold higher prices, make agriculture more remunerative, generate productive employment opportunities, and shall prove game changer in transforming agriculture sector.

Misunderstanding Over Secondary Agriculture

Often Secondary Agriculture (SA) is misunderstood as it is all post-harvest processing and value addition. Even many have started calling, bee keeping, floriculture, poultry farming etc. as part of secondary agriculture. In fact, all these are part of the main or primary agriculture.

Activities leading to making main agricultural produce consumable in any form as food are mostly part of primary, secondary and tertiary processing, and should not be called as Secondary Agriculture. However, those products may be a feeder raw material for SA units.

High Value Addition To Primary Agriculture

Secondary agriculture is high value addition to primary agriculture for bridging the gap between urban and rural economies of India. Secondary Agriculture adds high value, creates

jobs, reduces pollutions, improves farm economies rapidly, builds rural agro-industries, increases international trades, adds quality to life of rural population, makes agriculture internationally competitive and finally it can play an important role in searching import substitutes and make India self-reliant (Atma Nirbhar).

Secondary Agriculture is defined as "All practices and processes which increases farmers' income by converting agricultural residues and byproducts into high value commodities for pharmaceutical, industrial, medicinal and specified food uses by using efficient technologies, market intelligence and global preferences". High value product extraction from complete biomass of a particular crop, rural industrialization and marketing are the main element of the Secondary Agriculture (NAAS policy paper #119).

Opportunities In SA

Unlike primary agriculture and processing, the Secondary Agriculture activities and processes are entirely different. This is mainly because the outputs of the Secondary Agriculture may not directly be used for human consumption and animal feed. The primary users of the products obtained through Secondary Agriculture are for specialized industries, such as pharmaceutical, nutraceutical, gums and adhesives, food supplements, electronics, etc. Therefore, the Secondary Agriculture needs holistic approach.

The avenues of Secondary Agriculture may be categorized into three types:

Segregation and conversion of bio-mass/byproducts in dense and storable form through primary unit operations (sorting, drying, pulverization, densification, packaging). The units for crop residues will be of small capacities, designed for handling multiple biomass to ensure round the year operation, and established in the production catchments. Establishing call center or Ola/Uber type models may be tried for collection, transportation of raw materials from villages to processing centers. This can be an independent enterprise at block or panchayat level.

Secondary processing units for high value compounds production: Relatively large capacity extraction units to separate high value components from the biomass/byproducts with feed/composting units. These enterprises will get the raw material from the feeder units and have facility for processing multiple biomass. There is a need to establish agro-processing units near the collection centers at block or district level.

Specialty product units: Enterprises that separate high value compounds and prepare products as per the demand of consumers of domestic or global markets. These enterprises will be the main customer base for secondary agriculture outputs.

Main important element of success of SA is flow of raw materials from villages to panchayat to block to district and then finally to Enterprises of Secondary Agriculture (ESA).

Establishment of ESA and their inter-linked feeder chain will make help in development of agri-industrialized rural economy and shall prove a game changer for Indian Agriculture.