



## EFFECT OF VALUE ADDITION AND PRODUCT DIVERSIFICATION ON HERBAL PRODUCT PROMOTION

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Article Received on 30/06/2022

Article Revised on 21/07/2022

Article Accepted on 11/08/2022

### ABSTRACT

This review is about how value addition and product diversification influence herbal product promotion. Medicinal plant products are widely used in treating or preventing various diseases in developing countries. The various value-added medicinal plant products which are in demand in the market include dried plant parts, dried powders, concentrated extracts, isolated phytochemicals, herbal medicinal formulations, herbal cosmetics, nutraceuticals, insecticide and biopesticide preparations. Value addition is adding extra benefits to a product in terms of improved shelf life, efficacy and product acceptance. When herbal raw materials are processed properly as per WHO guidelines their quality and shelf life will be improved. Product diversification is the practice of expanding the sales of an existing product by applying new technology. For product diversity the best example is herbal shampoo, which is available in the form of dry powder, liquid, gel, emulsion with added benefits like antidandruff or hair growth promoting qualities prepared in different colors with different fragrances to meet consumer requirements. Aloe vera is used as a medicine in Ayurveda whereas its juice is sold as a nutraceutical and it is also used in many cosmetic preparations. Many traditional herbal products are now available in the market as nano formulations with improved effects. Product diversification leads to variety of options for product buyers and also boosts company's brand image and yields good profits. Value addition and product diversification of herbal products aid in consumer acceptance and also provides scope to the company to face the global marketing challenges.

**KEYWORDS:** Herbal products, Value addition, Product diversification, Sustainability.

### INTRODUCTION

India is the one of the world's rich sources for medicinal plants. Most of the plant materials are exported as raw materials and as concentrated extracts. There are greater opportunities for adding value to raw commodities in health, nutrition, and cosmeceuticals as consumer needs are high in these areas. This demand resulted in introduction of many value-added and diversified herbal products in the national and international markets based on the needs of consumers.<sup>[1]</sup> Value addition of herbal raw materials and diversification of herbal products to meet the consumer requirements are essential for commercial viability of herbal products in the market. Many raw materials have basic value in their original state but adding value helps in fetching more profits. For example, fresh Amla fruit is edible but it is perishable, the fruit's shelf life can be improved by drying and powdering. The dried fruit can be used in different Ayurvedic formulations and herbal cosmeceuticals preparations. The main aim of value addition and product diversification is to provide the products with desired quality, safety and efficacy to the consumers. Several

factors directly and indirectly influence value addition and product diversification of an herbal product.

#### Value Addition

Value addition is the process of adding economic value to a product by changing its current place, time, and qualities as preferred in the marketplace.<sup>[2-3]</sup> Value addition of an existing product is done to earn the goodwill through maximizing customer satisfaction by understanding and fulfilling the customer requirements and expectations. Value addition of a product can be done by changing the physical state of the product or by introducing differentiating products or by producing more products that improve the efficiency up the supply chain.<sup>[4]</sup> It is also important to identify the value-added activities that will support the necessary investment in research, processing, and marketing to introduce value added products.<sup>[3]</sup> For introducing a value-added product to consumers, the product has to pass through conception of idea to different phases of production including disposal of the container after use.<sup>[2]</sup>

**Approaches to value addition:**

Adding value to products can be accomplished in different ways, but generally two main ways innovation or coordination are used.<sup>[5]</sup> Innovation focuses on improving existing processes, procedures, products, and services or creating new ones. Often, successful value-added ideas focus on very narrow, highly technical, geographically large markets where competition is sparse.<sup>[6]</sup> As consumer desires become diverse, value-adding activities have the potential to become more in number. Value-added projects should start with intelligent market information on customers and competitors to make sure an opportunity exists. To be successful in the market the company involved in value addition of a product should seek advice from experts, consider the opinions of stakeholders, study conditions and trends and develop strategic planning for implementation.<sup>[3]</sup>

**Ways to value addition of medicinal plant raw materials**

Value addition of a product has to be done based on the requirements and expectations of customers by following effective management systems to improve company's profits as well as goodwill. Value addition of the medicinal plants can be achieved directly by improving the quality of the cultivated or collected plant material and indirectly by processing of the plant material to assure its quality. Direct value addition to a medicinal plant is possible by collecting the plant in the proper season and at right stage with suitable processing methods. For enhancing and ensuring quality, safety and efficacy of herbal drugs, appropriate quality control methods need to be used at every stage of production starting from raw materials to finished product. Implementation of Good Agricultural Practices (GAP) and Good Manufacturing Practices (GMP) will reduce the risk of contaminants in the raw materials and end products.

**Precautions to be followed during value addition of herbal raw materials**

A value-added herbal product quality is influenced by the soil type, climatic conditions in which the plants are grown along with cultivation method opted, collection and processing methods followed including storage techniques used. To add value to herbal raw materials all the intended plant parts should be collected from healthy plants grown in clean surroundings at maturity, and are required to be dried immediately after collection. After collection and cleaning grading and sorting of plant material before cutting or further processing is essential to maintain quality of herbal drugs. Before storage the plant materials are to be tested for moisture content, total ash content, foreign organic material and extractive values. The plant material should be free from toxic materials such as aflatoxins and harmful microorganisms and should possess pesticides and heavy metals within specified limits. Thin layer chromatography to identify marker compounds and to quantify marker compounds

quantitative assay should be performed. Before packing and storage the parts need to be dried completely. Aromatic plant parts are to be dried under shade and underground parts are to be collected from completely grown, washed thoroughly under tap water and sun dried. Thick plant parts are sliced to facilitate complete drying. Further packing of the dried and cleaned materials should be done in well closed chemically inert containers. The plant materials should be stored under specified conditions in order to avoid contamination of plant materials and to prevent deterioration of phytoconstituents.<sup>[7]</sup>

**Processing of the medicinal plants to value added products**

Proper processing of medicinal plant parts improves their medicinal value. The plant material can be converted to powders, extracts, tablets or capsules. The powdered plant material is extracted with a suitable solvent using suitable method. The extracts are distilled under reduced pressure at low temperatures to remove the solvent and the concentrated extracts are spray dried. These extracts can be standardized to know the strength of the marker compounds. Alternately, homogenous powder of the desired particle size of dried plant material is mixed with suitable ingredients and filled into a capsule or compressed to a tablet. Thus, processing of the medicinal plant material raw material results in value addition.<sup>[7]</sup>

**Challenges and limitations**

Many adverse events of herbal medicines can be attributed to poor quality of raw materials or finished products. The main challenge with herbal medicines is consistency in quality of raw materials and finished products.<sup>[8]</sup> The active chemical constituents of medicinal plants are responsible for their therapeutic activity. But, seasonal variation and stages of plant growth influence the concentration of secondary metabolites present in the plant and consequently the efficacy of raw drugs collected in different seasons and at different stages of the plant may not be the same. In addition, raw materials of a medicinal plant grown in the same region may have varied concentration of marker compounds and as such may not be suitable for industry use. This may result in rejections or yield low price to the medicinal plant suppliers. Elimination of possible contaminants such as toxic metals, pesticides from herbal raw materials and removal of solvent residues from herbal extracts to permissible limits is both expensive and time consuming.

**Product diversification**

Product diversification is the practice of expanding the original market for an existing product. This strategy is also used to increase the sales associated with survival of an existing product in the market that has been facing declining sales due to market saturation.<sup>[9]</sup> The main aim of product diversification is to boost the company's brand image and consumer acceptance. Product diversification also yields good profit and helps the

company to compete with competitors. When the market undergoes the process of saturation, product diversification helps the company in reducing the risk of business.<sup>[10]</sup>

### Product Diversification Strategies

Product diversification strategy is known to be one of the major forms of business growth strategies. It is also termed as business development. It can be done by adding new products to the range or by altering the existing products. Diversification strategy enables the business to get the opportunity to grow through increased sales by entering the new markets or existing customers.<sup>[11]</sup> Product diversification can be different from business to business. The strategy to diversify products will depend on how much effort and money has been invested in it and how much of a risk a company is prepared to take. There are 3 main strategies for product diversification. 1. Concentric diversification is one of the most effective ways a business can diversify its products by implementing of products that a company already offers. 2. Conglomerate diversification is when a company adds new products to attract an all-new group of customers. The high growth in a new market segment may prompt a company to take this option. 3. The horizontal diversification strategy is about adding a new product and selling it to existing customers. Diversifying into the same product category is a more appealing option than venturing into new markets.<sup>[12]</sup> Product diversification can be achieved by entering into additional markets and also by adopting pricing strategies.<sup>[13]</sup> The general techniques followed for product diversification include, repacking, renaming, resizing, repricing, brand extension and product extensions.<sup>[10]</sup> The rewards of product diversification strategy are beneficial in the long run, so it should be an integral part of any business. When product diversification is done the right way, it can take the business to great heights.<sup>[12]</sup>

A company must conduct Porter's three tests to check if diversification will be successful. 1. The Attractiveness Test: This test addresses if the new market being entered can give the business long-term growth. 2. The Cost of Entry Test: Evaluate how expensive it to enter the new market and how much you'd spend. 3. The Better Off Test: Look across business operations to evaluate what skills are used and applied for the diversification process. It is worthy to follow Porter's three tests to create a new product and to diversify in the new markets. Porter's three tests work well along with the repricing, repackaging, product extensions, resizing and renaming techniques to diversify the existing product line.<sup>[12]</sup>

### Product diversification-Benefits

The objective of product diversification is to popularize brand image by enhancing consumer acceptance thereby improves company's profit. By product diversification a company can withstand competition in the market from competing companies. This helps in maximizing sales

and to cater to consumer needs with minimum expenditure. Product diversification curtails market expenditure, increases the popularity and goodwill of the company and helps to face the competition.<sup>[10]</sup> Product diversification allows the company for introducing variety of quality products to consumers. As a result, consumers get more choices for picking a good product from the market. When product diversification is done appropriately, brand image and company profitability automatically increase.

India is the richest source of medicinal plants. Medicinal plants are widely used in manufacturing a number of internationally popular herbal products. Value addition and product diversification are the vital forces that help in sustainability of herbal products thereby helps in the conservation of medicinal plants. Product diversification with value addition improves consumer acceptance of the product. Product diversification is also a win over strategy to face the global marketing challenges by herbal product industries. The best example for product diversification with value addition is herbal hair pack. The composition of herbal hair packs available in the market vary to cater different consumers. 1. Henna 2. Henna with amla, 3. Henna, amla with indigo powder, 4. Henna, Amla, Indigo, Fenugreek, 5. Henna, Amla, Indigo, Fenugreek, Hibiscus, Dhavanam. Another example is some medicinal plants that are used in Ayurveda, Siddha, Unani, Homeopathy systems of medicine are also used in herbal cosmetics preparation to meet the needs of consumers. Amla fruit is used as one of the ingredients in Triphala churna, Chyawanprash preparation, is also used in herbal hair oils and herbal shampoos preparation. Some herbal formulations are available as tablets as well as liquid formulations such as syrups, mixtures to meet the requirement of different age group patients. Thus, product diversification is helping to meet the needs of consumers as well as bringing profits to the company.

### Product diversification-Challenges

Due to the diversification strategy, reliance on single-line products is reduced, and a company faces new challenges. Thus, expanding into new markets requires additional expertise in producing and selling different products.<sup>[12]</sup>

### Scope of value addition and product diversification

Export of value-added products would fetch higher profits than export of raw materials. From a single medicinal plant, it is possible to manufacture a number of value-added products which can be marketed nationally or internationally. Herbal product industry is an upcoming industry with plenty of opportunities for new, young, innovative entrepreneurs for starting successful, eco-friendly industries. The export of herbs and value-added extracts of medicinal herbs is gradually increasing over the years. India exported USD 330.18 million worth of herbs, USD 456.12 billion worth of value-added extracts of medicinal herbs/herbal products and

AYUSH and USD 456.12million worth of herbal products during 2017-18. Many countries are importing these value-added products from India and there is good scope to commercially utilize this demand.<sup>[1]</sup>

Value addition to a medicinal plant can be achieved through processing the raw material to produce a commercially marketable product similar to or different from the raw material. Value addition to medicinal plant parts can be done by simply grading, cutting, drying, powdering and packing the parts.

This promotes rural entrepreneurs, as the technologies are simple, eco-friendly and add value to the products. Preparing herbal extracts, formulations, isolating phytochemicals using advanced skills is another way of adding value to medicinal plants by which national and international trade is also possible. Herbal teas and herbal drinks such as nannari, sugandhipala, aloe, noni are popular value-added herbal products in India. Plant based pesticides such as Azadiractin from Neem and Nicotine from Tobacco have great demand in the market.<sup>[14]</sup> Herbal hair oils, herbal soaps, herbal shampoos, herbal face creams are well accepted cosmeceuticals. Among nutraceuticals garlic oil, Spirulina are widely used products. In Ayurvedic formulations Chyavanaprash, Trikatu churna, Asavas, Arishtas are widely marketed preparations. Value addition and product diversification of herbal products by maintaining quality and efficacy of an herbal product aid in the consumer acceptance and helps in sustainability of the product in the market. When value added and diversified plant products are in demand in the market, cultivation and conservation of medicinal plants also will be promoted for sustainable supply of medicinal plant raw materials to herbal drug industries. There are good opportunities for India for considerable income generation through value addition and product diversification of medicinal plants. In future, India will become an important exporter of value-added herbal products in international market.

## CONCLUSION

Herbal product promotion takes place by introducing consumer need-based value-added products and diversified products appropriately in the market by the companies. To achieve this, adaptation of newer technologies in cultivation, processing, packaging, storage, transportation and in quality control are required. Further, proper research and development activities on product and process development including newer marketing methods, knowledge on intellectual property rights help the company in sustaining competition in the market by introducing value added products and diversified products as per the demand of consumers.

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