



## Effect of Value Addition and Product Diversification on Herbal Product Promotion

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### ABSTRACT

This review is about how value addition and product diversification influence herbal product promotion. Medicinal plant products are widely used in treating and preventing various diseases in developing countries. The various value-added herbal products available 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 features to a product in terms of improved shelf life, efficacy and product acceptance. When herbal product raw materials are processed properly as per WHO guidelines, the herbal product quality and shelf life will be improved. Product diversification is the practice of expanding the sales of an existing product by applying new technology to the product. For product diversification, the best example is herbal shampoo, which is available in different forms such as dry powder, liquid, gel, emulsion with added benefits like antidandruff, hair growth promoting qualities, prepared in different colors using variety of fragrances to meet consumer requirements. Another example is Aloe vera, which is used as a medicine in Ayurveda, also sold as a nutraceutical and 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 an herbal product aid in consumer acceptance and also facilitates the company to face the global marketing challenges.

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

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indirectly influence value addition and product diversification of an herbal product. Thus, during the process of value addition and product diversification of a product, it is also essential to consider the quality, safety and efficacy of the product to sustain the product in the market.

### 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 achieved by changing the physical state of the product or by introducing differentiating products or by producing more products that improve the sales<sup>4</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>. 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>.

### Approaches to value addition

Adding value to a product can be accomplished in different ways, but generally by two main ways innovation and coordination<sup>4-5</sup>. Innovation focuses on improving existing

### INTRODUCTION

India is one of the world's richest sources for medicinal plants. From India, most of the plant materials are exported as direct parts, powders and as concentrated extracts. There are great opportunities for adding value to raw commodities in health, nutrition, and cosmeceuticals as consumer needs are high in these areas. This demand resulted in the introduction of many value-added and diversified herbal products in the national and international markets<sup>1</sup>. Value addition to herbal product raw materials and diversification of herbal products are essential for commercial viability of herbal products in the market and to meet the consumer requirements. Many herbal product raw materials have basic value in their original state but adding value helps in fetching more profits and product sustainability. For example, fresh Amla fruit is edible but is perishable, the fruit's shelf life can be improved by drying and powdering. The dried fruit is used in different Ayurvedic formulations and herbal cosmeceuticals preparation. Several factors directly and



processes, procedures, products and services or creating new ones. Coordination concentrates on the requirements involved in the production of a product and marketing of the produced product<sup>6</sup>. Often, successful value-added ideas focus on very narrow, highly technical, geographically large markets where competition is sparse<sup>7</sup>. 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 market conditions and trends and develop strategic planning for implementation<sup>3</sup>.

#### **Ways to value addition of an herbal product**

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 customer goodwill. Value addition of an herbal product 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 an herbal product 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 herbal product raw materials and end products.

#### **Precautions to be followed during value addition to an herbal product**

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 an herbal product, all the intended plant parts should be collected from healthy plants grown in clean surroundings at maturity. After collection and cleaning grading and sorting of plant material before cutting or further processing is essential to maintain quality of herbal drugs. Some plant parts required to be dried immediately after collection. Before storage, the plant materials need 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, harmful microorganisms, should possess pesticides and heavy metals within the specified limits. 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 plants, washed thoroughly under tap water and sun dried. Thick plant parts are sliced to facilitate complete drying. Further the dried and cleaned materials should be stored in well closed chemically inert containers under specified conditions in

order to avoid contamination of plant materials and to prevent deterioration of phytoconstituents. Thin layer chromatography and quantitative assay should be performed to identify and quantify marker compounds present in herbal product raw materials<sup>8</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 into powders, extracts, tablets or capsules. Initially, the powdered plant material has to be extracted with a suitable solvent using appropriate method. The extracts require to be distilled under reduced pressure at low temperatures to remove the solvent. These extracts should be standardized to know the strength of the marker compounds and then spray dried. Alternately, homogenous powder of the desired particle size of dried plant material can be mixed with suitable ingredients and filled into a capsule or compressed to a tablet. Thus, processing of an herbal product raw materials results in value addition<sup>8</sup>.

#### **Challenges and limitations involved in herbal product promotion**

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>9</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 product 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>10</sup>. The main aim of product diversification is to boost the company's brand image and consumer acceptance. Product diversification also yields good profits 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>11</sup>.



### Product Diversification Strategies

Product diversification is known to be one of the major forms of business growth strategies. It can be accomplished by adding new products to the range or by altering the existing products. Diversification strategies enable the business to get the opportunity to grow through increased sales by entering the new markets or through existing customers<sup>12</sup>. Product diversification can be different from business to business. The strategy to diversify a product 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. The first is concentric diversification, one of the most effective ways a business can diversify its products by implementing to products that a company already offers. The second is conglomerate diversification, followed 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. The third is horizontal diversification, 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>13</sup>. Product diversification can be achieved by entering into additional markets and also by adopting pricing strategies<sup>14</sup>. The rewards of product diversification strategies are beneficial in the long run, so it should be an integral part of any business. When product diversification is done in the right way, it can take the business to great heights<sup>13</sup>. The general techniques followed for product diversification include, repackaging, renaming, resizing, repricing, brand extension and product extensions<sup>11</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 one would 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>13</sup>.

### Product diversification-Benefits

The objective of the product diversification is to popularize brand image by enhancing consumer acceptance thereby improving 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 in the market<sup>11</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 implemented appropriately, brand image and company profitability will be automatically increased.

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 dye. The composition of herbal hair dyes available in the market vary to fulfill consumer requirements [Table 1].

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. Another example is, Amla fruit, used as one of the ingredients, in Triphala churna, Chyawanprash preparation, 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 [Table 2].

**Table 1:** Value added Herbal hair dyes

Product	Contents	Contents	Contents	Contents	Contents	Function
1	Henna	-	-	-	-	Colors hair orange
2	Henna	Amla	-	-	-	Colors hair orange and hair conditioner
3	Henna	Amla	Indigo	-	-	Colors hair black and hair conditioner
4	Henna	Amla	Indigo	Fenugreek		Colors hair black, hair conditioner and hair growth promoter
5	Henna	Amla	Indigo	Fenugreek	Hibiscus	Colors hair black, hair conditioner and hair growth promoter



**Table 2:** Herbal Product diversification<sup>15-16</sup>

Main component	Product name	Product form	Function
Amla	Triphala churna	Powder	Immunity booster
Amla	Chyawanprash	Semisolid	Immunity booster
Amla	Ashokarishta	Liquid	Hormonal imbalance in women
Amla	Kanchanar guggulu	Tablets	Hypothyroidism
Amla	Mouth freshener	Liquid	Mouth freshener
Amla	Amla ginger Toffee	Solid	Digestive
Amla	Amla juice	Juice	Hair growth promoter
Amla	Amla hair oil	Oil	Hair growth promoter

Thus, product diversification is helping to meet the needs of consumers as well as bringing profits to the company. Amla is rich in fiber, vitamins, minerals, anti-oxidants and have therapeutic value. Development of value-added products of Amla such as dried and dehydrated fruits, squash, candies, pickles and powders and condensed fruit juices helps in avoiding wastage of fresh fruit and promotes business<sup>15</sup>.

#### Product diversification-Challenges

Due to the diversification strategy, reliance on single-line products will be reduced, and a company faces new challenges. Product diversification requires a lot of innovation, R&D effort and additional investment. Thus, expanding into new markets requires additional expertise in producing and selling different products<sup>13</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 has gradually increased over the years. India exported 330.18 million US \$ worth of herbs, 456.12million US \$ worth of value-added extracts of medicinal herbs/herbal products and AYUSH products during 2017-18<sup>1</sup>. The export of Ayurvedic and herbal products was 539.57 million U.S. dollars in 2020-2021 year and was increased to 612 million U.S. dollars in 2021-2022<sup>17-18</sup>. The Covid-19 pandemic impact has accelerated the growth of herbal formulations consumption globally. There was high demand for ginger, pepper and turmeric. The global herbal medicine market size is expected to reach US\$ 411.2 billion by 2026, at a CAGR of 20.5%<sup>19</sup>. Many countries are importing these value-added products from India and there is good scope to commercially utilize this demand<sup>1</sup>. Worldwide, consumers preference to natural products has been increasing due to rising popularity of plant-based ingredients. Herbal Personal Care and Cosmetics products are dominating the market. Some of

the popular herbal product manufacturers in India are Patanjali Ayurveda Ltd, Dabur Limited, The Himalaya Drug Company, Zandu, Baidyanath, Amway and Lotus Herbals Private Limited<sup>20</sup>.

Value addition to an herbal product raw material 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 from medicinal plants using advanced skills promotes national and international trade. 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>21</sup>.

Herbal hair oils, herbal soaps, herbal shampoos, herbal face creams are well accepted cosmeceuticals. Among nutraceuticals garlic oil, Spirulina are widely used products. Among 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 will be promoted for sustainable supply of medicinal plants to herbal drug industries. There are good opportunities for India to generate considerable income through value addition and product diversification of herbal products. 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 requirements of consumers.

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