

Need to mention on every product made from Medicinal Crops or Business Crops in context to Immunity

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Article Info: Received - 31 March 2020, Published – 06 April 2020.

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Acknowledge to the Idea Originator: The idea is to analyse the safety measures of health and Immunity boost management of relationship between functional components of food, health and well-being. The idea Originator Jv'n Dr. Panckaj Garg always strives for betterment of Immunity boost community and through this paper he provides Health advisory for community health management.

Publication Ideology

The University initiative behind this publication is to exhibit the uniqueness of the research work done in which the reviewers were actively involved where Jv'n Dr. Panckaj Garg acted as the chief mentor and all other authors as mentors, under the aegis of “**Centre of Planning, Integration and Correlation**” which acts for integration of research and planning being done at “University Thought Process Lab” and to correlate the same with Indian literature. The work done in this paper “**Need to mention on every product made from Medicinal Crops or Business Crops in context to Immunity**” is outcome of “University Thought Process Lab” which is integrated with invention and science & technology.

Abstract

Immunity is significant factor as per the need of current state. A strong immune system can fight easily against any pathogen attack. Immunity can be enhanced through healthy food products. But there is a need to ensure about the quality of food products now days. Purity, safety and efficacy of nutritional and medicinal properties of food products is mandatory. This study explores the basic differentiation in between Business and Medicinal Crops, requirement of their geo tagging (Indicator of Identified grow area of crops). It also reveals about the possibility of labeling of food products by discloser of their crop types (either Medicinal Crops or Business Crops) and requirement of additional supplements needed for immunity. This study promotes the cultivation and regular use of healthy diet of Medicinal Crops.

Keywords- Immunity, Business and Medicinal Crops, Geo tagging, Labeling of food products

Introduction

Current outbreak of epidemic conditions opens all doors to discussion about Community Health Management (Garg et al, 2020 a; Garg et al 2020 b). Immunity need for health is very important according to present scenario. A healthy immune system protects us by first creating a barrier that stops those invaders, or antigens, from entering the body (Calder et al 2002). If one slips by the barrier, the immune system produces white blood cells, and other chemicals and proteins that attack and destroy these foreign substances. A healthy immune system can defeat invading pathogens, where two bacteria

that cause diseases. Give our body more than a fighting chance by feeding our self medicinal crops, foods to keep our immune system strong naturally by the value of medicinal properties. On the other hand, business crops having the less nutritional value are responsible for low immune system. It is not useful for the immunity boost management.

Consuming lots of fruits, vegetables and whole grains is an important aspect of good immune function. In addition, many studies have linked low immune system with the use of Business crop in hybrid and cultured in lab with or without medicinal properties with impaired immune response in body system. So, a plant-based diet can do double-duty to support immune function by also helping our community maintain a healthy immune environment of the body. Regular use of medicinal crop in daily diet and exercise and managing your stress are also essential aspects of a strong immune system (Yaqoob et al 2010).

The idea of boosting immunity is enticing, but the ability to do so has proved elusive for several reasons. The immune system is precisely that a system, not a single entity. To function well, it requires balance and harmony. There is still much that researchers don't know about the details and interconnections of the immune response with respect to comparison of business crop and medicinal crop's therapeutic value. For now, there are no scientifically proven direct links between lifestyle, market demand to satisfaction to eat. Regular use of medicinal crops with medicinal properties regularly will enhance immune function.

This study suggest on more and more use of medicinal crop for the betterment of immunity boost management system. Healthy immune function starts with what our feed and takes our body. Medicinal Crop, Food supplement, Nutritional rich food having the fully nutritional value beneficial for the immunity boosts Management system for the betterment of community Health Management. This study explores the need of healthy diet, exercise and other factors on the immune response. In the meantime, general healthy-living strategies are a good way like medicinal crops to start giving our immune system. (Barba et al 2012)

Medicinal crops and Business crops

In modern situation, Agriculture revolution is booming with the demand of bulk production of crops with the negligibility of nutritional and medicinal quality. It is high time to identify crops on the basis of their medicinal and nutritional purity. Researchers would like to introduce new abbreviations for crops in terms of their medicinal and nutritional purity level. In this era, two terms can easily differentiate the previous that are Medicinal Crops and Business Crops. Medicinal crop means having the fully nutritional and medicinal value grow as per preferable weather, soil and water. On the other hand, Business crop means having the less nutritional value grow as per market demand to satisfaction to eat. Medicinal crops will be seasonal and grow in specific region with their favorable climate conditions. Business crops can be grown in any region without any specific climate conditions and are available in every season according to market demand (Table 1).

Business Crops	Medicinal Crops
Business crop means having the less nutritional value grow as per market demand to satisfaction to eat.	Medicinal crop means having the fully nutritional and medicinal value grow as per preferable weather, soil and water.
Develop business crop in hybrid and cultured in lab with or without medicinal properties. Focused on Market need.	Geo identification of crop Quality, and their specific area for cultivation and collection, notifies their medicinal properties to build up Nutrition immunity.
Every product should be marketed and disclose their ingredient and also mention that made from business crop and need of additional nutrition supplements by consumer for immunity.	Every product should be marketed and disclose their ingredient and also mention that made from medicinal crop and no need of additional nutrition supplements by consumer for immunity.

Table 1: Differentiation between Business Crops and Medicinal crops and requirement of their labeling in Food products

Disadvantages of Business crops

Now days, Cultivars are focusing only on production with high yielding crops and neglecting crops quality in terms of Nutrition. Each crop has its own favorable environmental conditions to grow. However, cultivars are trying to grow each and every crop without knowing the importance of climate conditions for crop nutrition. Consequently, Business crops are being developed as hybrid and cultured in lab with or without medicinal properties focused on quantity and availability in every season. These business crops are having less or negligible nutritional values.

Previous studies of fruits, vegetables and grains have reported that a decline in nutritional value has happened. There is significant confirmation that such major concerning issues related to changes in cultivated varieties, with some high-yielding plants being less nutritious than past and natural varieties (Ray, 2015). One group of foreign researchers also reported in their study that statistically reliable declines for six nutrients — protein, calcium, potassium, iron and vitamins B2 and C in 43 garden crops (Commercial crops) in comparison to old varieties (Davis et al, 2004).

Business crops are having less nutritional values. Somewhere, wrong climate conditions are one of the main reasons behind this. Each crop has its own preferable condition such as weather, temperature, soil and water availability. But cultivars are ignoring these essential factors and growing under stressed conditions. When crop don't get preferable conditions to grow it faces Abiotic stress. Abiotic stress causes depletion in the nutritional values of crops and impacts on Global food security (Clair and Lynch 2010; Wang and Frei, 2011; Marles 2017; Wheeler and Braun, 2019). Abiotic stress negatively affects cereal grain composition in terms of phyto-chemicals, vitamins, fiber, protein, free amino acids, sugars, and oils (Halford et al 2015).

Advantages of Medicinal crops and use as Immunity booster

Crops grow in their specific area for cultivation with local atmosphere known as medicinal crops. That's why these plants cannot be surfaced with any kind of Abiotic stress conditions. In optimum conditions and season, plants have their pure

nutritional value without any dilution. Medicinal crop can help immune system. Medicinal crops are rich in flavonoids, vitamin C, or the carotenoids so can enhance immune function. The flavonoid-rich herbs may also possess mild anti-inflammatory action. Their beneficial effect named as anti-inflammatory and as an immune-stimulant action. Certain herbs can help support immune system on a long-term basis. Garlic is full of compounds like allicin, ajoene and thiosulfates, powerful molecules that help your body prevent and fight infections. Garlic also has a rich history of being used topically to disinfect wounds and fight fungal infections. The best way to use garlic for immune support is to consume fresh, crushed garlic. In case of Apple (*Malus sylvestris*), Irish Peach and Zouches Pipin are popular early varieties. These varieties bears yield during April – May. The popular mid season varieties are KKL 1, Carrington and Winterstein. These varieties bears yield during June – July. Rome Beauty, Parlin's Beauty and KKL 1 are early varieties. These varieties bears yield during August – September. Red lateritic soils with good drainage and high organic matter are more suitable. The soil pH should be around 5.8 to 6.2. Apple can be grown at an elevation of 1200 to 2000 m. Planting spreads from June to December. With these favorable conditions, apples are purely rich with phnolic compounds and Antioxidants. Chlorogenic acid, the main phenolic acid present in the apple, has a great ability to “scavenge” free radicals. Quercetin, gallic acid and α -tocopherol, chlorogenic acid, rutin are also present. 100 g portion of apples has an antioxidant activity equal to 1.500 mg of vitamin C (Kalinowska et al, 2014). Apple has its medicinal properties and its regular consumption prevent us from various types of chronic diseases as mentioned in Figure 1.

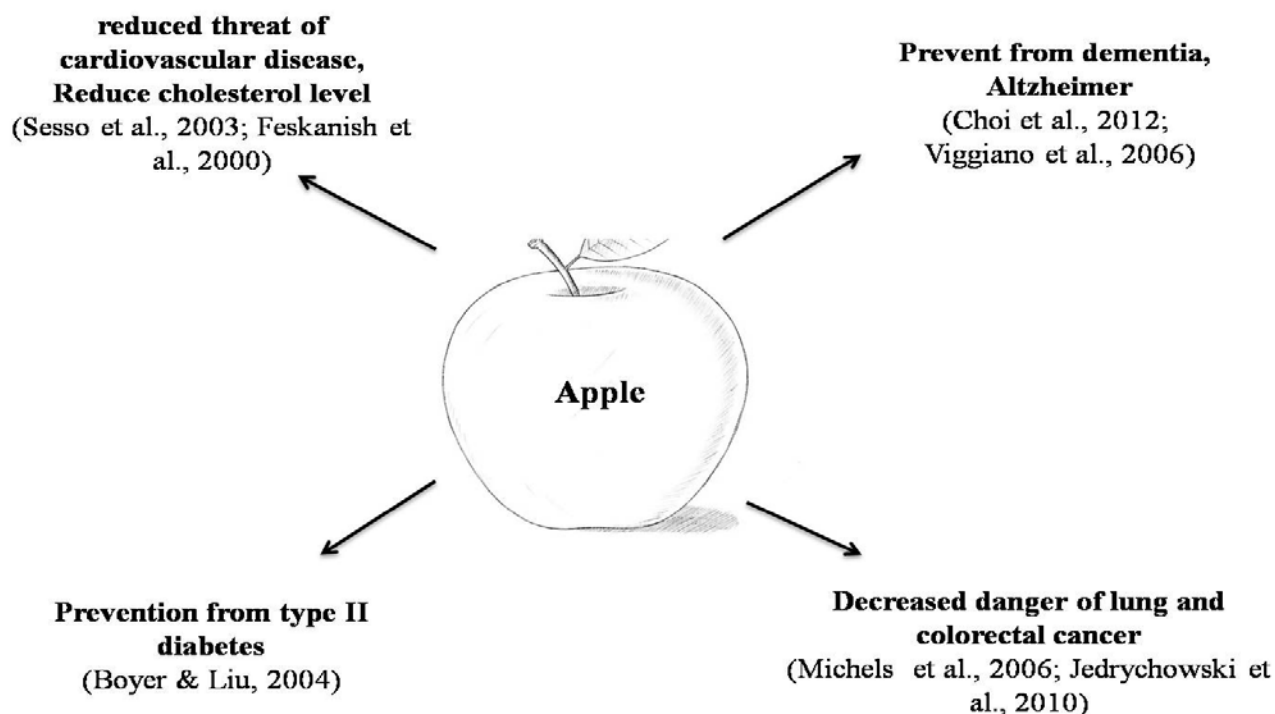


Figure 1: **Apple** (*Malus sylvestris*) and its medicinal properties

Similarly Carrot is a cool season crop and will develop a good color when grown at 15°C to 20°C. The crop needs deep loose loamy soil. It requires a pH ranging from 6.0 to 7.0 for higher production. Carrot can be grown throughout the year at an elevation above 1500 meters with assured irrigation. It is root vegetables grows in favorable conditions are

completely loaded with bioactive compounds such as carotenoids and dietary fibers with considerable levels of numerous other functional components having significant health-promising qualities (Sharma et al, 2011).

Each crop has its own climate conditions and its natural genetic structure to produce various compounds at high level. Regular consumptions of these naturally grown medicinal crops, immunity must be boost up to fight against dangerous diseases including epidemic.

Geo Tagging for Plants identification

At present, the production rate of medicinal crops with compare to business crop has decreased over the years with the annual growth rate of per cent per annum. All peoples are using business crop for the satisfaction to eat that's why immune system is very poor for community health care society. In the present context of 'need to back to the nature' in health care, it is relevant that valuable plant species are not only preserved but also their cultivation developed in order to meet the entire demand of the domestic industries as also to exploit the bright prospect for health care. Shift from cultivation of business crop will also ensure purity, authenticity and sustainable supply of raw materials required for herbal drugs, including polyhedral but business crop having the less nutritional value grow as per market demand. So for the authentication, Geo tagging for Medicinal Crops must be mandatory.

Geo identification of crop quality and their specific area for cultivation and collection, notifies their medicinal properties to build up Nutrition immunity (Akhtar et al 2011). Agrochemical tagging, using the pure identification tags, improve crop health management and environmental monitoring. While phytosanitary certifications are mandatory in high-cost cultivation systems and a need for risk management may promote Geo tagging. Geo Tagging will ensure the Crop authenticity including its specific cultivation area, climate conditions. Hybrid and cultured Crops in lab who meets the same expectations of Nutritional and medicinal value may also be considered as Medicinal Crops.

The present study aims to understand the production percentage scenario of Medicinal crop and Business crops in India. Here is a big challenge for Farmers to cultivate Medicinal Crops on Large level. So, Ministry of Agriculture & Farmers' Welfare should propose schemes for advanced cultivation for promoting Medicinal crops and promote farmers to cultivate more medicinal crops in their specific area. On the other hand, Scientist also have task to develop crops with all their specific Medicinal and nutritional purities and can go for Geo tagging. So that, people can get healthy diet with all required nutrition on the daily basis and boost their immunity.

Labeling of food products

In addition to facts on nutrition and ingredients, labels can provide readers with relevant information, up-to-date information on the product's environmental, social and regional sustainability. Labeling products with respect to the sustainability of their production, processing and transporting is a powerful tool for achieving more environmentally sound, economically viable, biologically diverse, and socially just communities for the justification of medicinal properties for the immunity boost management system (Aldrich et al 2001).

Food labeling in is regulated by several government agencies. The Food and Drug Administration (FDA), U.S. Department of Health and Human Services regulates most packaged food, produce, seafood, milk, and eggs. The Food

Safety and Inspection Service (FSIS), of the U.S. Department of Agriculture (USDA) regulate meat and poultry products (Subpart A of part 101.8).

Nutrition information appears in the labeling of almost all foods.

- Labels provide information on how the food fits into an overall daily diet.
- Labels include information on the amount per serving of saturated fat, cholesterol, dietary fiber, and other nutrients of health concern to today's consumers.
- Label describes a food's nutrient content light, fat-free, and low-calorie, for example, Claims about the relationship between a nutrient or food and a disease or immunity health related condition. These are helpful for people who are concerned about eating foods that may help keep them healthier longer with strong immune system.
- Standardized serving sizes that make nutritional comparisons of similar products easier should be specified.
- Declarations of total percentage of juice in juice drinks. This enables consumers to know exactly how much juice is in a product (Aldrich et al 2001).

Every Food product has its ingredient list with the quantity. But, what consumer is eating? Is he or she is getting nutritional and medicinal properties for immune boost up? For this query, that product must be disclosing their ingredients with crop details such as labeling of Medicinal crop or Business Crop use and the requirement status of additional nutrition supplements by consumer. This labeling will be helpful to mark the quality of food products.

Conclusion

Immunity is remarkable aspect to fight against pathogens. Immune system can be strong with healthy life style and healthy diet plan having crop ingredients with medicinal and nutritional properties. In current scenario, cultivars are only focused on production with highly ignorance on quality. They are producing only Business crops with less or no medicinal properties. Our immune system becoming weak through incorporating such crop's ingredients in diet, there is need to move back to nature and should be focused on medicinal crops grown in its natural climate with high medicinal properties. Agriculture revolution must be concentrate on improve cultivation of medicinal plants and motivate farmers to grow Medicinal crops. Advance research must also be focused on developing varieties of crops to meet up pure Nutritional and medicinal value. Along with that, Geo tagging of Medicinal Crops and labeling of food products must be mandatory. So that community must be aware about the medicinal and nutritional purity of products. Here is need to make strong immune system strong by consuming products made up of Medicinal crops on daily basis. So that immune system will be strong enough to fight against chronic diseases including Epidemic.

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