JUST AGRICULTURE
multidisciplinary e-Newsletter

Underutilized Vegetables: A Lost Treasure

Chetna Shaktawat, Arvind Kumar Chaurasiya
[1]Assistant professor, Bhupal Nobels University, Udaipur, Rajasthan
[2]Assitant professor, Department of Post Harvest Technology, North Eastern Hills, Tura Campus

ARTICLE ID: 54

Abstract:

Vegetable crops that are neither widely marketed nor farmed on a commercial basis are considered underutilized. Lettuce, asparagus, celery, amaranthus, globe artichokes, leeks, chekurmanis, Chinese cabbage, and other vegetables are among underused crops. Because of their high vitamin, micronutrient, and protein content, these crops are regarded as essential to achieving nutritional security. Most underutilized vegetable crops can withstand challenging agroclimatic circumstances. The low growth and bad state of underused vegetable crops may be caused by a shortage of planting material, a lack of knowledge about the crops' nutritional and therapeutic value, and a lack of knowledge about production methods. Under the MIDH (Mission for Integrated Development of Horticulture) and MEIS (Merchandize Export from India Scheme) programs, the Indian government has been doing research on underused crops. The Ministry of Agriculture has also initiated a nationwide coordinated effort. In essence, these neglected vegetable crops have enormous promise for generating money, ensuring food security, and providing environmental benefits, all of which strengthen the Indian economy in the long run.

Introduction:

Thirty or so crop species have become actively farmed over the last 500 years due to greater connections between opposing populations and the development of a trade system; these species now form the foundation of most global agriculture. Vegetable farming has become more intense, focusing on fewer crop species that lead to monoculture and drastically reducing the number of species needed for world food security. While over 60 cultivated and over 30 lesser-known vegetable crops may be grown in India due to its different agroclimatic conditions, underused vegetables have received less attention (Kumar et al., 2018). Vegetable crops classified as underutilized are those that receive little to no attention from consumers, agricultural researchers, plant breeders, and politicians. Vegetable crops are typically neglected

JUST AGRICULTURE
multidisciplinary e-Newsletter

and not traded as These species have historically been utilized for food, fiber, fuel, oil, and medicinal purposes. Since these crops aren't as competitive as other vegetable crops, they are used less frequently. By changing and diversifying crop rotation, enhancing soil health, and lowering the frequency of pests and illnesses that arise in monocrop or short rotation agriculture systems, these crops increase the sustainability of the system. Vegetable crops that are underused have the potential to contribute to food security and better nutrition, higher income for the rural poor, environmental stability, and cultural biodiversity.

Features of underutilized vegetable crops and their product:

A crop's food worth must be shown by science. The crop needs to have been farmed historically, or only in a limited geographic region, and it needs to have native usage in certain places. Crops need a minimal or nonexistent mechanism for supplying seeds. Currently, crop needs less cultivation than other traditional crops. consumers, farmers, academics, and policy officials paid it little mind.

Importance:

There is unrealized potential in the vast category of neglected and underexplored plants. These crops (Amaranthus, Portulaca, Basella) are rich in vitamins; they are also a good source of minerals, fiber, and dietary fiber (Kakrol, kheksa, and all green vegetables, as well as all portions of winged bean). When compared to global crops like tomato and cabbage, many traditional or indigenous veggies have a higher nutritional content. The potential for traditional vegetables and underused legume crops like moong beans to play a significant part in measures to achieve nutritional security is evident in their capacity as providers of vital vitamins, minerals, protein, and other phytonutrients. These crops offer dietary variety, resulting in a more nutritionally balanced supply. These crops contribute to the preservation of cultural variety. These crops can withstand harsh environmental conditions. Through creating jobs and revenue, they can aid in the eradication of poverty. They offer global food security and agricultural diversification. Native veggies play a significant role in avoiding many diseases, reducing hunger, and improving overall health. They are high in vitamins and antioxidants such phenolics. It results in year-round balanced nutrition, opens new markets, and raises farm revenue. Additionally, it offers complementary resources that let customers choose a wider range of healthful foods and make more money, while producers may expand into new markets. They are vital biological resources for the impoverished in rural areas and can help millions of

JUST AGRICULTURE
multidisciplinary e-Newsletter

tribal people live better lives. Vegetables that are underutilized yet strong in antioxidant activity are also rich in vitamins, minerals, and other health-promoting elements. They are crucial in helping to diversify a diet and provide a more balanced supply of micronutrients. Additionally, underused vegetable crops can feed the impoverished by fulfilling the dietary needs of vulnerable populations. underused vegetables also exhibit tolerance to a variety of biotic and abiotic stresses.

1. **Amaranthus:** Amaranthus is either a transient perennial or an annual plant. According to Shukla et al. (2010), amaranthus is an inexpensive, high-protein and dietary fiber source. It is a significant source of vitamins, particularly vitamin A proponents. Amarnathus leaves are rich in minerals, carotene, and phytochemicals such as isothiocyanates and phenolic compounds. These compounds have potent antioxidant qualities and have been linked to the prevention and treatment of illnesses including arteriosclerosis, cancer, and aging.
2. **Asparagus:** In Hindi, the herbaceous perennial plant known as asparagus is referred to as "Shatawar." It is mostly farmed for the "spears," or fragile, succulent shoots, which are eaten as a vegetable and to make soups. It keeps producing for ten to fifteen years. A white, crystalline material with diuretic qualities called "asparagine" is found in asparagus juice. Because of its rich minerals, vitamins, and high cellulose content, it plays a significant role in nutrition. Asparagus spears are canned and frozen in large quantities.
3. **Lettuce:**The vegetable with the largest area in a salad is lettuce. The head and fragile leaves are eaten raw as salad. Its edible oil, which is derived from its seeds, is the original reason it is grown. It is a great source of iron, calcium, and vitamin A. There are four different kinds of grown lettuce botanical varietals. 1. Type of Head 2. Type of Cos 3. Type of Leafy 4. Type of Stem. It is an annual herbaceous plant that yields simple seeds. It contains antibacterial qualities and aids in the prevention of cancer, heart disease, sleeplessness, and anxiety.
4. **Elephant foot yam:** Other names for elephant foot yams are stink lilies and white spot gigantic arum. It is referred to as zamikand, suran, and sooran in Hindi. It is a herbaceous perennial plant. In addition to being a vegetable, it is used to make pickles, chips, and other foods. It is cultivated for its therapeutic qualities as well. According to Ramalingam et al. (2010), it includes triacotane, stigma sterol, betulinic acid, and lupeol. In addition, it has blood purifying qualities and is used to treat rheumatism, asthma, tumors, and piles

JUST AGRICULTURE
multidisciplinary e-Newsletter

(Kirtikar and Basu, 1989). Elephant foot corms contain calcium oxalate, which causes throat and mouth irritation and acridity.

5. **Pointed gourd:** The possum is referred to be the "King of Gourds." In Hindi, it is also referred to as Parwal, Pravar. It's commonly referred to as green potato in India. Its highly nutritious leaves are utilized as leafy vegetables. It is a great source of minerals, vitamins A and C, and carbs. Its juice is applied as a tonic for alopecia and in situations of subacute liver enlargement (Nadkarnier, 1996). It is a perennial rootstock climber that is dioecious.

Conclusion:

Underutilized veggies that are rich in nutrients and have therapeutic potential in addition to being able to withstand bad weather. However, these crops continue to be underestimated because of a lack of complete understanding about their potential, a shortage of seeding equipment, and a lack of awareness about how to incorporate them into manufacturing processes. The output of these veggies would meet the needs and address the issues of scarcity and malnutrition. More generation and jobs would result from it, supporting the country's economy in the long run. These may be used and included into the diet in situations of nutritional deficiencies and allergies, which will provide diversity and encourage an active and healthy lifestyle. Plans for the research, management, application, and development of genetic resources in underused crops must thus be delayed.

References

Kumar, R., Rajashree, V., Sagar, L., Tripura, U., Karthick, K., Karthick, R., and Prasath, G., 2018. Underutilized vegetables as rich source of medicinal value: A boon for the pharmaceutical industries and farmer income. International Journal of Chemical Studies, 6(4), 3320-3323.

Ramalingam, R., Hima, B.K., Bindu, M.B., Ravinder, N.A., and Banji, D., 2010. Phytochemical and anthelmintic evaluation of corm of Amorphophallus campanulatus. International Journal of Pharma and Bio Sciences, 4, 1-9.

Shukla, S., Bhargava, A., Chatterjee, A., Srivastava, A., and Singh, S.P., 2010. Genotypic variability in vegetable amaranth (Amaranthus tricolor L) for foliage yield and its contributing traits over successive cuttings and years. Euphytica, 151(1), 103-110.

Thakur, M., 2014. Underutilized food crops: Treasure for future India. Food How to cite this article: Science Research Journal, 5(2), 174183.