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# BABY POTATOES-A NOVEL WAY OF POTATO CONSUMPTION

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**ABSTRACT: In potato production, optimum tuber size is important to maximize crop value and hence growers target different tuber sizes at harvest to meet the localized market demand as produce size affects the pricing. Normally medium sized and large sized tubers get premium rates as compared to small tubers in the market, however, small sized tubers of specific varieties are also liked for some specific purposes and therefore get premium rates. In the changing food habit scenario, tubers weighing 20-40 grams specially packed and marketed as "*baby potatoes*" attract consumers. Baby potatoes are valued by consumers for freshness, taste, size and shape. Baby potatoes are consumed worldwide in a variety of dishes through various culinary methods.**

**KEYWORDS:** Baby potatoes, tuber size, crop duration, utilization, nutritional values

## INTRODUCTION

Potatoes, a staple in global diets, serve both fresh consumption and processing purposes. Potato production goals require optimizing tuber size to maximize crop value and hence, potato growers and researchers target different tuber size at harvest depending on localized market demand as produce size affects the pricing. Growers can maximize price through optimization of tuber size distribution to maximize crop value (Love and Thompson-Johns, 1999). For the fresh market, potato prices are more variable over different types of potatoes like small (<20 gram), medium (20-75 gram) and large (>75 gram) sized tubers and market location as well as period of year. In the market normally medium sized and large sized tubers get premium rates as compared to small tubers, however, in specific locations, small sized tubers of specific varieties are liked and therefore get premium rates. Nowadays tubers of 20-40 grams specially packed and marketed as "*baby potatoes*" are getting consumer attention in the market. This review cites the updates on baby potatoes right from varietal selection to production details and success stories in this segment.

### Baby potatoes

Baby potatoes are small sized potatoes that are produced either due to genotypic character or byproducts of the grading of tuber size during processing and either produced by agronomic management practices. Very small sized potatoes of fully matured crops are also prevalent in some areas. The review explores their diverse names, characteristics, and nutritional values, underscoring their appeal to consumers for freshness, taste and size. Baby potatoes are known by different names in different regions or countries like *New potatoes*, *small potatoes*, *little potatoes*, *marble sized potatoes*, *chote aloo*, *petite potatoes*, *pearl sized potatoes*, *little luxury*, *bite sized potatoes*, *miniature potatoes,* etc. Baby potatoes are low in starch and high in fiber (with skin on) and therefore considered healthier than the large size potatoes. Freshly harvested small sized potatoes appeal to consumers due to freshness, size, taste and shape and fetch

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premium rates in the market. These ' little luxuries' are getting preference in high-end retail and food service markets. The main quality characteristics of fresh-cut potatoes include a bright appearance, firm texture, and absence of darkening and dehydration (Tudela and Gil, 2020). In recent years, the demand for small or baby potatoes with a target size of 20-40 mm in diameter is catching the culinary market under the fresh potato segment. In India, recent market trends indicated that baby potatoes are now visible in megamalls, supermarkets etc., in NCR and fetch premium rates (Singh, 2013).

## The popularity of baby potatoes

The potato crop was introduced in the beginning of the 17$^{th}$ century to India. In India, naturally occurring variants are known as indigenous or desi varieties that are known by different local names in diverse dialects. Desi varieties are either *Solanum tuberosum* ssp. *andigena* or hybrids of *S. tuberosum* ssp. *tuberosum* and *S. tuberosum* ssp. *andigena*. This group of varieties has distinguished characteristics of local adaption; tolerance to abiotic stresses i.e. heat and drought, slower rate of degeneration, shorter dormancy, preferred culinary properties in terms of taste, lesser cooking time, early maturity etc. Although, local varieties do not have organized seed potato production programmes but they do have their presence in a limited area and scale for one or the other reasons. These varieties are, however, preferred for their special traits like skin and flesh colour, taste, and preparation of other local dishes (Gupta and Luthra, 2020). After reviewing the historical context of potato cultivation in India, among indigenous varieties the popularity of baby potatoes has been well documented. It presents insights into locally grown varieties like Badami aloo, Rangpuria, and Phulwa, emphasizing their adaptation to specific climates and consumer preferences.

Most of local varieties produce numerous small tubers (Luthra *et al*. 2015) and many such local varieties like Phulwa had been a highly valued potato variety in the Indian household due to its excellent keeping quality, waxy texture, pleasant flavour and ability to withstand prolonged cooking without losing shape (Pushkarnath, 1976), however it is susceptible to degeneration diseases. It has long stolen, small scattered tubers and is late maturing. Phulwa produces white, round medium to large small tubers, deep eyes and blue purple colour on crown eyes and yellow flesh. Phulwa was cultivated in North Indian plains covering Assam, Bihar, Madhya Pradesh, Orissa, Punjab, Haryana, Uttar Pradesh and West Bengal (Pushkarnath, 1969) before the suitable replacement was released by CPRI.

So far, some locally grown varieties like Badami aloo (North Eastern region and West Bengal), Rangpuria (North Eastern region), Pakri Alu, Cooch Behar Local-1 (West Bengal), Bareilly red (Bareilly, Uttar Pradesh) and Phulwa (Farukhabad, Uttar Pradesh) are grown and sold in the market in limited scale. Tubers of Badami aloo and Rangpuria are very small and dark red. Rangpuria is round shaped and have minimal tuber yield reduction under high temperature, while Badami is nut-shaped (Paul *et al.* 2017). The tubers of Pakri Alu are round (Roy, 2019). Pushkanath 1969 reported a synonym of Pakri as Darjeeling Red Round, which was being cultivated in West Bengal and a synonym of Rangpuria as Phuwla, which was being cultivated in Assam. The information on some baby producing genotypes is presented in **Table 1.**

Small size potato tubers are highly acclimatized with the climate of north-

**Table 1: Some potato genotypes suitable for baby potatoes**

| Varieties | Localities | Tuber characters | Total tuber yield (t/ha) | Tubers/ plant | References |
|---|---|---|---|---|---|
| Phulwa | Assam, Bihar, Madhya Pradesh, Orissa, Punjab, Haryana, Uttar Pradesh and West Bengal | White, round, deep eyes yellow flesh | - | Large number of small tubers | Pushkarnath, 1969 |
| Kufri Himsona | Meerut, Uttar Pradesh | White, round, shallow eyes, creamy flesh (<40 mm) | 10.40 (60 days crop) | 18-20 | Rawal *et al*., 2011; Singh 2013 |
| Rangpuria | Tezpur, Assam | Round, medium tuber dormancy, good keeping quality, tuber dry matter (19%) | 1.55 | Small tubers | Paul *et al*., 2017 |
| Badami | Tezpur, Assam, India | Nut-shaped | 1.28 | Small tubers | Paul *et al*., 2017 |
| MSP/15-51 | Meerut, Uttar Pradesh | Purple skin, ovoid, medium eyes, red purple flesh | 26.08 | 33 | Luthra *et al*., 2018b |
| MSP/15-60 | Meerut, Uttar Pradesh | Red skin, round-ovoid, medium eyes, yellow flesh with red vascular ring | 35.62 | 47 | Luthra *et al*., 2018b |
| Bareilly Red | Meerut, Uttar Pradesh | Red skin, round, deep eyes, cream flesh with red broad vascular ring, extremely long tuber dormancy, tuber dry matter (16%) | 8.56 | 18-20 | Luthra *et al*., 2018b; Gupta and Luthra. 2020 |
| Badami Alu | Alipurduar/ Cooch Behar district, West Bengal | Reddish purple, reniform, medium deep, cream with dark pink vascular bundle | 15.82 | 42 | Roy, 2019 |
| Pakri Alu | Alipurduar/ Cooch Behar, West Bengal | White-cream skin, round, medium deep eyes, cream flesh | 15.03 | 36 | Roy, 2019 |
| Cooch Behar Local-1 | Alipurduar/ Cooch Behar, West Bengal | White-cream skin, round, medium deep eyes, cream flesh | 16.57 | 39 | Roy, 2019 |
| Badamia Aloo | Meerut, Uttar Pradesh | Red, ovoid, shallow-medium, yellow, extremely long tuber dormancy | 6.6 t/ha, All tubers <10g | 51 | SK Luthra, 2022, unpublished |
| Phulwa Red | Meerut, Uttar Pradesh | Extremely long tuber dormancy, tuber dry matter content (22%) | 15-16 t/ha | 16-20 | SK Luthra, 2022, unpublished |

eastern hill region and terai agro-ecological region (Chowdhary and Datta, 2020). Due to consumer preference for delicious taste after cooking, the crop produce fetch a higher price in the market. The baby potatoes are not available throughout the year. The climatic condition favours the cultivation of small potatoes; however, cultivation is restricted due to a lack of quality planting material, suitable improved varieties and improved production technologies. The crop of baby potatoes is mostly grown in this region apart from some other northern parts of West Bengal, North eastern states like Meghalaya and Manipur (Chowdhary and Datta, 2020).

In Bangladesh, familiar local varieties producing small sized tuber are Sheel Bilateem, which produces red, oblong tubers weighing about 30 g and is mostly cultivated in Rangpur, whereas Lal Pakri produces red round tubers weighing about 30 g is mostly cultivated in Dinajpur, Bogra and Sirajganj and Du Hajari with pale round tubers weighing 25 g is mostly cultivated in the Chittagong area.

## Salient features of baby potatoes

In general, small potatoes of uniform size are selected, so they cook through at the same time without the skin bursting. The larger potatoes are more prone to skin breaking when boiled or steamed. Baby potatoes are

served as a salad or as a side dish and do not require peeling, thereby retaining the phytonutrients in the skin and drastically reducing preparation and cooking time due to their small size (Kaur *et al*., 2023a). Baby potatoes should be firm and free from dirt and blemishes. They should have smooth skin and be devoid of green patches. The green patches are indicative of the presence of solanine, a glyco-alkaloid that imparts bitter taste and hence green tuber should not be used. The general characteristics of baby potatoes are summarized in **Table 2**. The different factors that affect the production and quality of baby potatoes are described below-

**Crop duration:** The crop duration of potato varieties in India is generally more than 90 days. Small sized tubers of fully matured crops of these varieties are marketed as baby potatoes. Another way of production of baby potatoes is crop harvest before maturity. Under such situation there is risk of higher glyco-alkaloids accumulation in tubers which may give bitter taste and are poisonous. Pre-mature crop harvest leads to greater yield reduction per unit area than ware potatoes, however achieving the earliest possible marketable yield is of vital importance for baby potato production (Harasim *et al*., 2004) as the lower yield is usually offset by higher selling price (Sawicka, 1998). Shankar *et al*., 2018 reported that delay in harvesting time (>75DAP) reduced the percent of small and medium size tubers and their yield in Indian potato varieties K. Himsona, K. Khyati and K. Pukhraj. However, Kufri Himsona had the greatest percent of small and medium size tubers suitable for baby potatoes and hence can be recommended for baby potato production under tropical conditions. Singh, 2013 reported two crops of baby potatoes of nearly 60 days crop duration per year will

**Table 2 General characteristics of baby potatoes**

| Traits | Baby potatoes | |
|---|---|---|
| | Pre-matured crop | Fully grown crop |
| Tuber size | <40 mm | <40 mm |
| Tuber colour | White cream/Red | White cream/Red |
| Tuber shape | Round/ovoid and uniform | Round/ovoid and uniform |
| Tuber eye depth | Shallow/medium | Shallow/medium |
| Tuber flesh colour | White cream/ Yellow/ partially coloured | White cream/ Yellow/ partially coloured |
| Greening | Nil | Nil |
| Internal defects | Nil | Nil |
| External defects | Nil | Nil |
| Texture | Waxy | Waxy or mealy |
| Flavour | Typical potato flavour | Typical potato flavor |
| Organoleptic attributes | Very good | Very good |
| Dry matter content | <18% | 18-20% |
| Glyco-alkaloid content | <15 mg/100g FTW | <15 mg/100g FTW |
| After cooking blackening | Nil | Nil |
| Enzymic browning | Minimum | Minimum |
| Disease resistance | Medium | High |
| Keeping quality | Good | Very good |

be profitable to farmers. The ideal variety yielding a higher percent and yield of baby potatoes under a growing climate could increase commercial sustainability. The varieties with high yielding potential can either be achieved through a greater number of small tubers (or) fewer number of very large size tubers per plant (Abbasi *et al*., 2004), in which the former approach is imperative for baby potato production. Few elite lines have been identified for small tubers with high yields (Luthra *et al*., 2005, Tariq *et al*., 2008). The identification of suitable varieties for baby potatoes will not only be beneficial for India but also in other countries, as presently Indian varieties are grown in several other countries (Luthra *et al*., 2004).

***Total tuber yield*:** The yield of baby potato varieties is comparatively low as compared to new improved varieties (**Table 1**). Luthra *et al.,* 2018b reported a very low total tuber yield of Bareilly red (9 t/ha) as compared to new advanced clone MSP/15-60 (36 t/ha) developed from cross Bareilly red × CP3770 and control variety Kufri Bahar (44 t/ha). Rawal *et al.,* 2011 reported baby potato yield of Kufri Himsona (10.7 t/ha) from 60 days of harvested crop. Paul *et al*., 2017 reported low yield in Rangpuria (1.55 t/ha) and Badami (1.28 t/ha) in Assam. However, Luthra 2022 (unpublished) noticed a tuber yield of 6.6 t/ha in Badami Aloo grown in Meerut.

***Number of tubers*:** The number of tubers per plant varies with the genotype, physiological age of seed, number of stems/plant and climatic conditions during tuber initiation phase of growth. Environmental conditions affecting tuber initiation include planting date, early season temperature, nutrition and water management, and weather extremes such as hot climate, hail or frost. Hence, developing ideal cultivars for small size tuber production, harvesting time should be manipulated to achieve the optimum tuber weight (Mihovilovich *et al*. 2014). Although, tuber bulking duration is of greater importance in determining the final yield of ware potato, bulking rate has a greater impact on baby potatoes. Heat stress leads to a higher number of smaller tubers per plant and lower tuber specific gravity with reduced dry matter content (Haverkort, 1990). Potato genotypes with many thin stems are known to produce numerous small sized tubers and such genotypes could be exploited in breeding for the production of varieties suitable for baby potatoes (Luthra 2001, Luthra *et al*. 2018a). Recently an advanced clone MSP/15-60 has been developed through conventional breeding that produces up to 47 tubers per plant (Luthra *et al.,* 2018b). In another study, Chowdhary and Datta, 2020 reported tuber/plant range from 23 to 68 based on an investigation of 25 small size potato genotypes. The account of variation in tubers numbers has been presented in **Table 1.**

***Tuber size*:** In general baby potatoes are bite size like cherry tomatoes. They are easy to prepare and offer a buttery taste and creamy texture. In India, the baby potatoes in general being sold in the market are simply regular potatoes being marketed after grading and selecting small sized tubers from the produce. The baby potatoes should have round tubers with shallow eyes and uniformity in size (<40 mm). Cowan (1985) found that size was one of the most important factors of concern to Irish urban potato consumers. Older consumers have a preference for small tubers compared to younger consumers. Average tuber size has been shown to decrease non-linearly in response to increasing crop density (Knowles and Knowles, 2006, Zebarth *et al*., 2006). Some of the small size potato genotypes are highly acclimatized with the climate with North Eastern Hill and terai agro-ecological region (Chowdhary and Datta, 2020). The smaller size tubers are getting better market price

during the initial phase of harvest season, hence farmers prefer to early harvest of any cultivar grown. A different grade standard for potatoes is being followed by Agmark and Codex in the country, where Codex defined a tuber size of 18.1 mm-28.0 mm as baby potatoes (Shankar *et al*., 2018).

***Shape*:** Small tubers of potatoes having round to ovoid shapes are suitable for baby potato cousins. In the northern parts of West Bengal, there are two types (round shaped and nut shaped) of small sized potato are grown (Chowdhary and Datta, 2020). In general, stolon length is long in baby potato varieties. Tuber abnormalities likely crack, scar, hollow heart, internal necrosis etc. are absent in tubers.

***Skin and flesh colour*:** Generally white/yellow skinned small tubers are preferred, however, due to the prevalence of coloured varieties and changing perception of consumers, red/purple skinned/fleshed potatoes are also being liked. Chowdhary and Datta, 2020, based on results of 25 genotypes collected from different areas of West Bengal, Sikkim and Assam reported that majority of genotypes had red skin (84%). The predominant tuber flesh colour varied from white to yellow and the majority of tubers showed yellow-cream colour (76%) followed by yellow flesh colour (12%). Along with the predominant tuber flesh colour some secondary colour, red (60%) is also present in the flesh of the potato tuber, which was distributed in the flesh by a broad vascular ring (56%) and scattered (4%) manner.

***Internal and external defects*:** Internal or external defect in potato tubers affects the quality of produce and marketability. External defects may be due to unwanted shape or size, knobbiness, cracking, decay, greening etc. Internal defects are imperfections occurring within the tubers, such as hollow heart, brown centre, internal brown spots etc. These defects may be caused by physiological or pathological reasons. Higher defects in the tubers increase the labour requirement during the sorting of tubers and ultimately enhance the operational cost apart from reducing the quality of produce.

***General impression*:** The small tubers have special attention in the market due to fresh produce and shining skin. Some of locally grown potato varieties like Bareilly Red have a low general impression owing to deep eyes and small sized tubers (Luthra *et al*., 2018b), however, they are liked by the consumer owing to appearance and specific culinary qualities. Similarly, another local variety Badami Alu grown in North Eastern regions and West Bengal had a moderate general impression but owing to fleet eyes and attractive coloured nut shaped tuber has preference by consumers.

***Glycoalkaloids content*:** Glycoalkaloids are secondary metabolites in potatoes and other members of the Solanaceae family, which serve as chemical defense against fungi, nematodes, herbivores and other stress conditions (Majeed *et al.,* 2014). High temperature stress during the vegetative stage and tuberization is known to trigger the accumulation of glyco-alkaloids in tubers. Cooking of green tubers should be avoided as they are known to contain high glyco-alkaloids and remain half cooked, if consumed give a bitter taste. Consumption of tubers with glyco-alkaloids concentrations above 20 mg/100 g fresh weight (FW) can cause nausea, vomiting, diarrhea, stomach and abdominal cramps, headache, fever, rapid and weak pulse, hurried breathing, hallucination, delirium, and in extreme cases coma (Friedman and McDonald, 1997). Therefore, for food safety purposes, an upper limit for glycoalkaloid content of 20 mg per 100 g FW has been established by the United States Department of Agriculture (Aziz *et al.,* 2012). Under Indian conditions, lower content

i.e., <15 mg per 100 g FW has been considered as a desirable level (Luthra *et al*., 2020).

***Tuber dry matter content:*** Potatoes containing more than 20% dry matter content with a mealy texture are preferred for fried and dehydrated products, while small size potatoes of dry matter between 18-20% and waxy texture are preferred for salad making and canning (Luthra *et al.,* 2004). The crop of baby potatoes is harvested early so as to achieve maximum baby sized tubers and hence tuber dry matter is lower than 16%. The genotypes with more number of tubers have in general low tuber dry matter (Luthra *et al.,* 2018a). However, advanced clone MSP/15-60, producing baby potatoes when harvested at 90 days contain 20% tuber dry matter (Luthra *et al.,* 2018b).

***Nutritional values*:** Baby potatoes have fewer calories and are fat-free and can be included in low-calories diets. The prevalence of high fibre helps in lowering cholesterol levels. These potatoes are a good source of folate, vitamin C, B1 and B6 and aids in boosting immunity. Bite-sized baby potatoes are whole food, naturally gluten free, with good carbohydrates that are absorbed slowly into the body system and give a longer fuller feeling with energy to burn. Luthra *et al.,* 2018b reported higher anthocyanin/ carotenoids/ascorbic acid content in a locally grown baby potato variety Bareilly Red (0.87mg/1450µg/106 mg) on 100 g FW basis. Nutrients and dietary fibres are concentrated in the peel or just below, and peeling removes them. Unpeeled baby potatoes, due to their size, have a higher percentage of peel and hence might be considered healthier. Baby potatoes are eaten intact and hence provide an opportunity to enjoy the original flavour of potatoes. Processed potatoes (papads) prepared from skinned baby potatoes showed higher protein, fibre, bioactives and mineral values (Kaur *et al.,* 2023b) and were organoleptically more acceptable compared to that prepared from peeled table variety. Tuber growth and development impact certain nutritional elements. Baby potatoes have 3 fold phenylpropanoids compared to that of mature potatoes of the same genotype (Navarre *et al.,* 2013). Folate (Goyer and Navarre 2009) and total carotenoids (Kotikova *et al.,* 2007; Morris *et al.,* 2004) content are also documented higher in immature potato tubers.

***Organoleptic attributes*:** Baby potatoes of locally grown varieties are liked due to their special taste, flavor and culinary qualities. A mealy texture is associated with high solids and a waxy texture with low solids. To achieve the maximum proportion of baby potatoes of improved varieties, the premature crop is harvested and thus tubers have low tuber dry matter and waxy texture. However, local varieties producing the large number of small tubers in a long duration (>90 days) may contain moderate tuber dry matter and thus have a mealy texture. Baby potatoes, typically taste sweeter than a mature potato and have softer flesh. Some of the known varieties producing baby potatoes Bareilly red, Phulwa red and Rangpuria have waxy texture (Gupta and Luthra, 2020).

## Production and utilization of baby potatoes

***Production practices*:** The production practices of baby potatoes are different from ware potato as it has a unique set of demands for suitable varieties and agronomic practices etc. Apart from variety, there are several other factors such as fertilization (nitrogen), seed spacing, climatic conditions and geographic location (Barry *et al*., 1990, Arsenault *et al*., 2001, Abbasi *et al*., 2004) which had an influence on yield. Rawal *et al.,* 2011 standardized the one fourth of recommended dose of fertilizers (68 N + 20 $P_2O_5$ + 38 $K_2O$ kg/ ha) for quick tuberization and optimum

sized baby potato production of variety Kufri Himsona. By following this, 20-24 t/ha of baby grade potatoes in double cropping of Kufri Himsona can be achieved. Seed aging increases tubers per plant and decreases the size of harvested tubers. Delayed planting is also known to promote the production of small or medium sized more tubers/plant. The interaction effect of growing environments and harvesting time is also reported to have a greater influence on tuber size and shape (Lisinska and Leszczynski, 1989, Sood *et al*., 2008). However, there are contradictory reports on growing environments with low (Bodlaender, 1958) or high temperature (Lafta and Lorenzen, 1995) favours the production of smaller tuber speculating selection of the ideal growing environments for greater baby potatoes production. Irrigation is to be stopped 10-12 days before harvest of baby potatoes for proper skin setting. Harvesting is to be completed within 2-3 days after haulm cutting. With these interventions, tubers can easily be utilized for a week as fresh or for preservation in the processing industry.

***Storage*:** Baby potatoes should be stored in a cool, dry and shady ambiance away from sunshine and dampness. The best location to store them is in a cool, dry, dark place. After cooking, the baby potatoes should be covered in cling film and stored in containers made of glass in the refrigerator. The cooked potatoes should be consumed within 2 to 3 days of refrigeration. Locally grown variety Phulwa red is known to have extremely long tuber dormancy, excellent keeping quality and tuber dry matter content of 22%, Rangpuria with medium tuber dormancy, good keeping quality possesses 19% tuber dry matter and Bareilly red possesses extremely long tuber dormancy, excellent keeping quality and tuber dry matter content of 16% (Gupta and Luthra. 2020).

***Packaging*:** In India, mostly loose tubers in graded or ungraded form were being sold in the traditional market and malls. During the last 10 years, the packaging of graded sugar free potatoes in nylon netted bags of 3 kg capacity has been adopted by the retailers to attract the consumers. However, baby potatoes in local markets are still being sold in loose form, but the packaging of baby potatoes is increasing in Delhi NCR and metro cities of the country. Tudela and Gill, 2020 reported that the best packaging method to preserve the sensory quality of fresh-cut potatoes up to 14 days at 4°C is vacuum or low $O_2$ in combination with sodium bisulfite to avoid browning, but off-odors can be developed if storage temperatures are not well maintained (> 4°C) or the length of storage time is prolonged (> 8 days).

***Marketing of Baby Potatoes*:** The quality of potatoes is of paramount importance to market acceptance. Appearance, colour, size, shape and defects are consumer's first impressions about the quality for fresh potatoes. Normally small sized baby potatoes are being sold in the market. However, baby potatoes of traditional varieties Bareilly red, Phulwa and Badami alu, Rangpuria, Pakri Alu, Cooch Behar Local-1 producing small sized tubers are also popular due to local consumer demands. In India, baby potatoes are also being traded through online companies like Big basket (Rs66/kg), Organic Siri (Rs49/0.5kg), Deep Rooted Inc. (Rs42/0.5 kg), FRUIT BOX & Co. (Rs38/kg), Amazan (Rs38/kg), Natur's basket (Rs 16/0.2kg). These rates vary from season to season.

***Uses of baby potatoes*:** The baby potatoes are creamer, rich in vitamins and minerals and have low calories. Baby potatoes are used worldwide in a variety of dishes ranging from salad, vegetables and part of main course. Baby potatoes are consumed in hundreds of dishes through various culinary methods, like steamed, boiled, grilled, roasted, stir fried, oven baked, partially fried or in salad etc.

One more way suited to Indian taste may be in recipes like 'Dum aloo'. Pricking the potatoes all over with a fork followed by seasoning allow proper absorption of flavours. In Punjab, Sharla, aloo masale vale is quite famous made from freshly harvested baby potatoes. In general, after proper washing and cooking, they are eaten with their naturally nutritious tasty skin and sometimes a thin layer of skin is removed in boiled or baked potatoes for special cooking. The peeled ones are more on the sweetish side, while the unpeeled ones have a nutty tinge to it. The baby potatoes when used with skin provide more dietary fibre as compared to peeled potatoes. Baby potatoes are not only cooked at home but they are an integral part of the menu of famous restaurants.

## Success stories of baby potatoes

In Canada, The Little Potato Company passionately focuses only on little potatoes, established in 1996 and are leading producer of creamer potatoes, highly nutritious, fully mature and naturally delicious small specialty potatoes. Coveted by foodies and chefs alike, these proprietary colorful creamers are available in produce sections across the US and Canada. These potatoes are sold prewashed, are nutritious and convenient, and special care is taken to ensure their consistent size so one can cook them in just 5 minutes. The product list includes Boomer Gold, Blushing Belle, Morning Pearl, Fingerling, Purely Purple, Garlic Parsley, Smoked Salt, etc. packed in fresh bags, kits ready for the microwave and also fully cooked easy sides.

In California, USA, Tasteful Selections (Bite Size Potatoes) was incorporated in 2009 by multi-generational potato farmers recognizing an opportunity to expand the potato category to meet the busy consumer's preference for simpler, convenient meals. Planting and harvesting more than 300 days a year, Tasteful Selections® owns the entire planting, growing, harvesting and packaging process and today is the brand leader of the baby potato category. They pioneered bite-size potatoes as a convenient source of nutrition, flavor versatility and variety for everyday meals and offer bite size potato varieties like Honey Gold, Purple Passion, Ruby Sensation, Sunburst Blend, Sunrise Medley, White Delights, Gold Fingerling, Red Fingerling, Sunset Fingerlings etc. to the customers as wide assortment of products, sizes and packaging types.

In India, Himalaya Food International Ltd. procures fully grown baby potatoes of 35-43 mm size naturally grown in the Himalayan foothills of India. Baby potatoes are hand cut in half and carefully scooped out. The product is IQF Frozen. The product is easy and quick to prepare and has a rich and special flavor. It has a rich golden exterior and light yellow from inside. They report that their baby potato skins are a great appetizer and chefs can use their culinary skills for stuffing the skins with cheese and Bacon, tomatoes, Garlic and Mushrooms, Cheese and pizza sauce etc., etc. The product is packed in bulk/retail packaging as per customer specifications. The product is stored at 0 degrees F or lower.

## Future thrusts

The review emphasizes the growing preference for baby potatoes among consumers and the need for concentrated interventions in planting materials, variety development, and improved production technologies. It outlines the potential future directions for research and cultivation practices to further enhance the production and popularity of baby potatoes in the ever-evolving culinary segment market. This comprehensive review serves as a valuable resource for researchers, growers, and consumers interested in gaining insights into the dynamic world of baby potatoes

## CONFLICT OF INTEREST

The authors declare that they have no conflict of interest

## ETHICAL STATEMENT

This article does not contain any studies with human participants or animals performed by any of the authors

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