

POTATO PROCESSING

DISCOVER. INVEST. PROFIT

Bangladesh is the eighth largest producer of potato in the world. The country usually has surplus potato production and offers substantial investment opportunities in processed foods. Bangladesh advocates for local and foreign direct investment in potato processing through its agro-policies, technical support and tax benefits.

Growth Drivers

- Consumer preference for ready-to-cook and ready-to-eat food products
- Low cost and availability of resources (raw materials, human resources etc.)
- Increasing demand from the international markets for value added potato products
- Growing number of private sector investors entering the market leading to market growth, innovation and product variations
- Availability of technical support and research for further growth

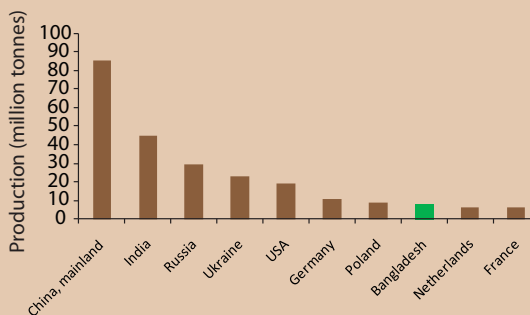
Production Overview

Potato in Bangladesh is in transition from a subsidiary to a commercial crop. Domestic production has exceeded 8 million tonnes due to favorable climate and soil.

Steady growth in potato production in Bangladesh

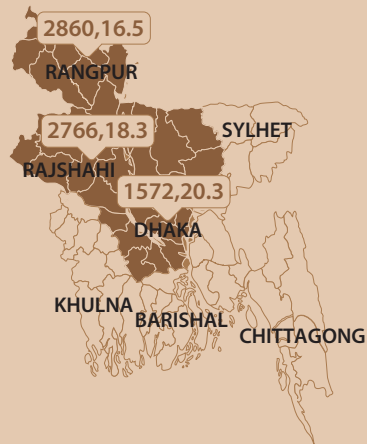


Bangladesh is one of the top 10 producers of potato



Potato Growing Areas in Bangladesh in 2010-11 (Production in '000 tonnes, Yield in tonnes/ha)

There are over 750,000 potato farmers in Bangladesh. Districts in Rangpur and Rajshahi divisions, Munshiganj, Manikganj, Narshingdi and Kushtia are the country's biggest potato producers.



Dry matter: 19-22% High Yielding Varieties 18-25 tonnes/ha

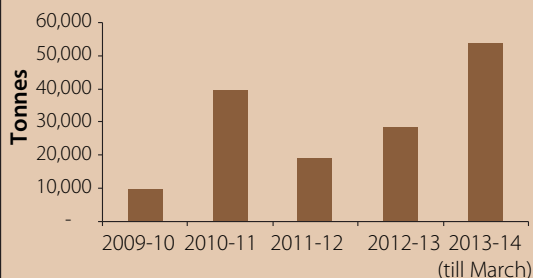
Dry matter content directly influences the yield of processed potatoes, oil absorption in fried products and the texture of cooked potatoes.

Diamond | Courage | Lady Rose | Asterix | Granola

Dry matter: 15-17% Local Varieties 10-15 tonnes/ha

Sheel Bilatee | Lal Sheel | Du Hajari

Export of raw potato has increased over the years



Value Added Potato Products

Potato is widely used as a table item in most households in Bangladesh. However, value added potato products like potato chips and potato flakes are gaining popularity in the country as food habits change. Internationally, potato flakes is consistently in high demand due to its use in preparing varied products including mashed potato, pasta and potato crackers. Also, potato starch has found its use in food processing, adhesive and textile applications.



Potato Chips



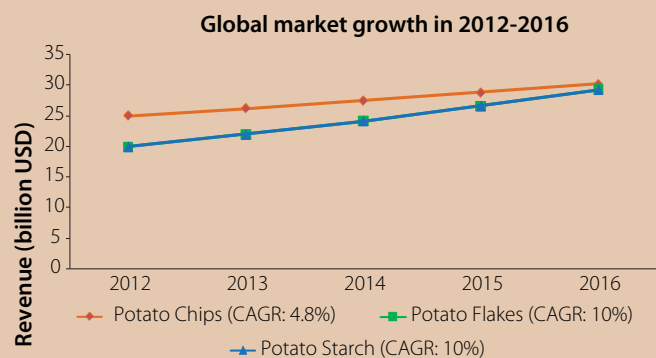
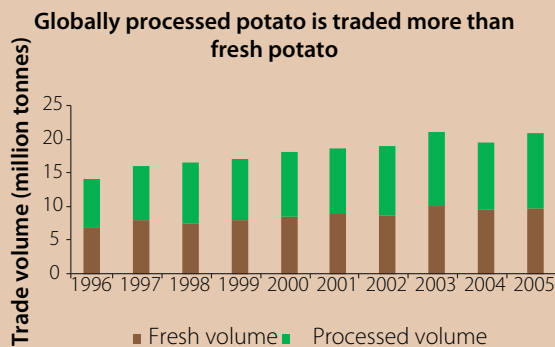
Potato Flakes



Potato Starch

Global Market Scenario Processed Potato

The rise in global potato production is largely due to unprecedented demand for ready-to-eat food. Processed potato products are now preferred more to fresh potatoes as global consumption pattern evolves. Global potato chips, flakes and starch markets are expected to grow at 4.8%, 10% and 10% between 2012 and 2016.



“ Availability of potato, rising income of people and high demand for convenient snacks make Bangladesh market a bright prospect for potato processing. The market is at a growing phase. Further investment will serve to drive innovation and quality in production. ”

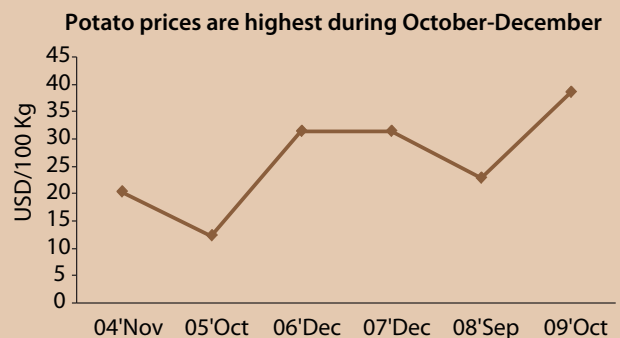
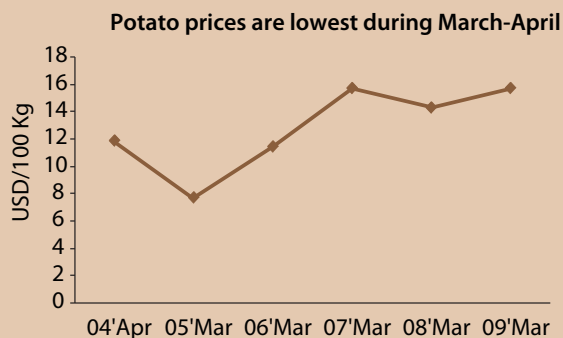
-MahbubulAlam, Chief Operating Officer, Quashem Food Products Ltd.

Investment Insights on Bangladesh Market

Supported by a strong source of supply of raw material, potato processing industry in Bangladesh serves an important opportunity for investors. There are a plethora of opportunities for exporting processed potato products. Moreover, Bangladesh's selling price is highly competitive in the global export market.

Potato Wholesale Prices

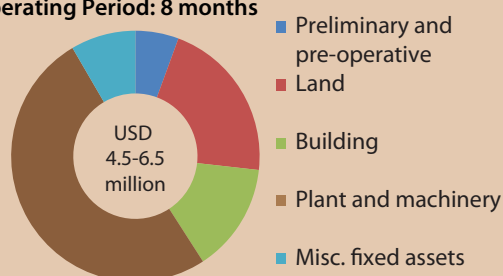
Wholesale prices of potato fluctuate throughout the year resulting in higher operational costs in some seasons. (Source: Department of Agricultural Marketing (DAM))



Potato Chips

Product varieties	Chips, crackers
Number of producers	15-20
Market size in 2009	USD 38 million
Retail price of potato chips	USD 0.28-0.35 per 38 grams package
Distributor price of potato chips	USD 0.23-0.25 per 38 grams package
Quality requirements	Appearance: Crisp Spices used for flavors: Non-toxic

Potato Chips Plant Capacity:
10-12 tonnes per day Annual
Operating Period: 8 months



Processing Steps

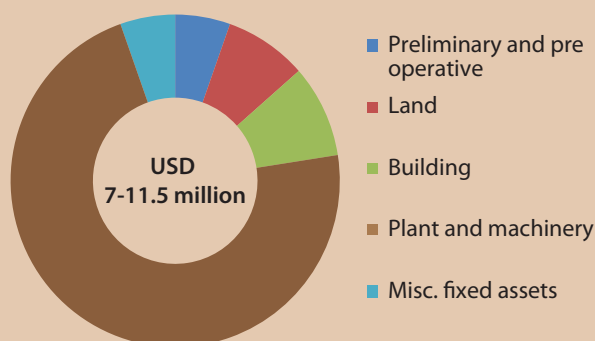
Local companies mostly use potato flakes, potato powder, starch, and wheat flour to produce potato crackers, most popular product among the product varieties. Recently, few local companies have started producing potato chips from potato slices. Although, potato slices taste better but are difficult to preserve over the season.



Potato Chips

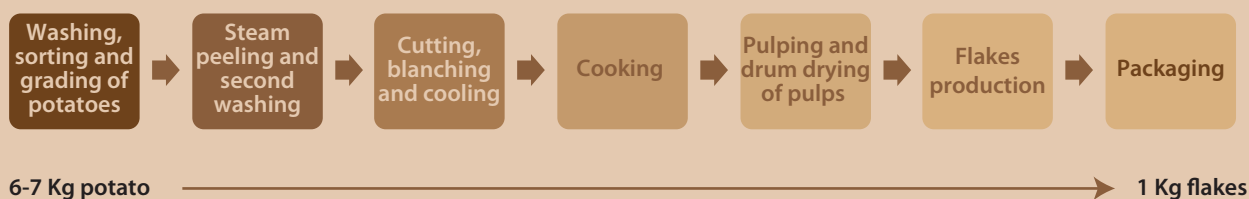
Number of producers	2-3
Export volume in 2007	1,182 tonnes
FOB export price in 2014	USD 1.2-1.5 per kg
Export destinations in 2010-14	Belgium, Australia, Germany, Lebanon, Malaysia, USA, Turkey, UAE, Saudi Arab, Pakistan, Chile, Ukraine, Romania
Import volume in 2007	389 tonnes
Cost of packaging	USD 0.55-0.60 per 25 kg package
Retail price in local market	USD 1.15-1.25/375 grams
Quality requirements	Appearance: No clots Color: Cream to pale yellow Taste: Natural potato flavor Smell: Natural potato

Potato Flakes Plant Capacity: 18-22 tonnes per day Annual
Operating Period: 5 months



Processing Steps

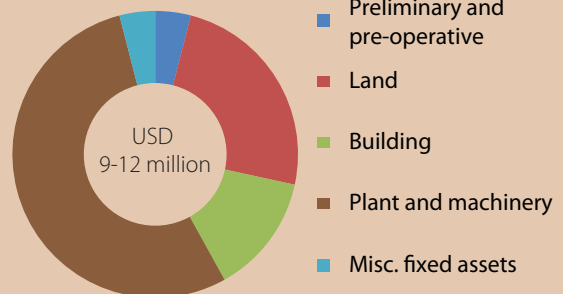
Potato flakes is a popular dehydrated potato product used globally. It is a conserved form of potato and used as a substitute for boiled potato. The process of dehydrating potatoes for flakes production is different from other vegetables as the product is required to have good aroma, taste and rehydration properties so as to function like freshly boiled potatoes. Potato flakes produced in Bangladesh are comparatively better because of whole potatoes being used for production and the product having less black and hard spots.



Potato Starch

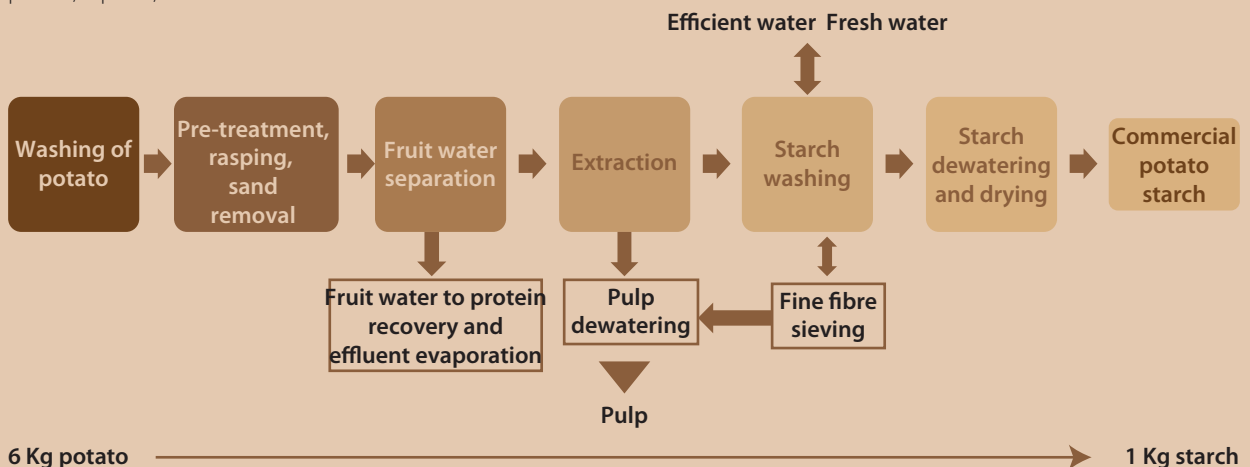
Number of producers	1-2
Annual export volume	1,000-1,500 tonnes
FOB export price in 2014	USD 950-1,050 per tonne
Export destinations in 2010-14	Pakistan, India, Middle-East, Thailand, Egypt, Belgium, Germany
Quality requirements	Appearance: Fine powder
	Color: White
	Taste: No taste
	Smell: Odorless
Cost of packaging	USD 0.55-0.60 per 25 kg package
Uses in food industry	Potato starch is used to impart functional properties such as binding, filling, thickening to processed foods and as a stabilizer in noodles, dairy products, bakery etc.
Use in non-food industry	Used in Pharmaceuticals, textile, plywood, adhesive and construction material industries

Potato Starch Plant Capacity: 25-30 tonnes per day
Annual Operating Period: 5 months



Processing Steps

Starch is present in an almost infinite number of plants. However, industry recovers starch from only a few of them, mainly the potato, tapioca, maize and wheat.



Further Investment Opportunities

Post-harvest losses in potato amount to 20-26% in Bangladesh. Potato pre-storage and cold chain present investment opportunities.

Post-harvest Losses at Different Levels

Producer (5- 8%)
Cold Storage (3%)
Trader (4-5%)
Retailer (up to 8-10%)
Total loss (up to 20-26%)

By-products

Rejected potatoes and peelings can be sent to farms to be used as animal feed. Also, the starch that is removed in the rinsing process of potato flakes can be used in starch processing.

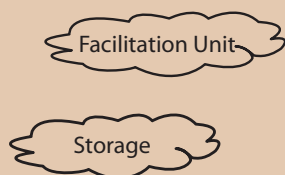
Business Incentives

- The potato industry enjoys
 - Tax holidays for 5-7 years
 - 20% cash incentive on export
 - Provision for 100% foreign equity
 - Import duty at the rate of 3% ad valorem is payable on capital machinery and spares imported for initial installation or balancing, modernization, rehabilitation and expansion of the existing industries. The value of spare parts should not, however, exceed 10% of the total cost and freight value of the machinery
 - Value Added Tax (VAT) is not payable for imported capital machinery and spares
 - Support from NGOs in improving access to and use of quality inputs and capacity building and mobilization of farmers
 - 45% supplementary duty on imported chips to encourage local investment in chips production
- Agricultural and Rural Credit Policy and Programme of Bangladesh Bank states that
 - All private banks will have to disburse at least 2.5 per cent of their total loan disbursement to the agriculture and rural sector
 - Loan disbursement target in agriculture for all the state owned and private banks is USD 2,000 million
 - Maximum interest rate for agricultural term-loan is 13%

Relevant Stakeholders

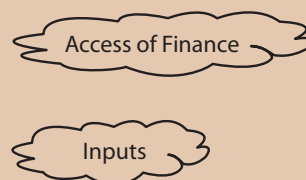
Board of Investment Bangladesh (BOI)

BOI encourages investment in private sector, identifies hindrance of investment and provides necessary facilities and assistance in the establishment of industries



Bangladesh Krishi Bank (BKB)

The state owned bank provides credit facilities of farmers and agri-business owners.



Bangladesh Cold Storage Association (BCSA)

A non-profit national association, has about 160 regular members besides contract farmers, suppliers and other market players



Bangladesh Agricultural Development Corporation (BADC)

Works in production, procurement, transport, storage and distribution of essential agricultural inputs. In the private sector, there are more than 100 companies involved, with over 8,000 registered seed dealers operating across the country.



Bangladesh Agricultural Research Institute (BARI)

Is the country's largest multi-crop research institute. It has completed research on 56 different varieties of potatoes. Producers can readily find information on these varieties from BARI website.

Bangladesh Standards & Testing Institution (BSTI)

Formulates national standards of industrial, food and chemical products, controls quality of food products and oversees accuracy of weights and measures.



Potato Cold Storages



Private Seed Suppliers

Social Impact

Bangladesh offers a very prospective market for potato processing. Investment in the potato sector can potentially drive employment, poverty alleviation and social security. Market linkages can lead to other support industries and more employment. Moreover, potato is a great source of vitamins and minerals, and potato industry has been instrumental in improving food security in Bangladesh.

For further information, please visit www.boi.gov.bd

