The Potato Farming Success of Gujarat's Banaskantha District
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Forbes India

http://forbesindia.com/printcontent/35747

Contrary to NGO stories of exploited farmers and middlemen running riot, Gujarat's potato farmers have scripted an entrepreneurial success story by teaming up with multinationals and other buyers of their produce

Parthi Chaudhary is a police official with the Anti-Corruption Bureau, posted at Mehsana in Gujarat. He is in the news for busting records, not white collar scams. Three years ago, Chaudhary picked 87.188 tonnes of potatoes from every hectare of his farm in Palanpur, the headquarters of Banaskantha district. The event, he says, was witnessed by a team put together by the collector, including agriculture experts from nearby Dantiwada University. The buzz in this part of the country is that it is a world record, though a Google search throws up another claimant, from Bihar, who is said to have harvested 108.8 tonnes of potato earlier this year. India's best average yield, from Gujarat and Punjab, is 26 tonnes a hectare.

Chaudhary treats his 90-acre farm as nature's manufactory. For him agriculture is an industrial activity which can be broken up into discrete processes that play on the aspects that aid growth and tamp down those that do not to coax the best out of soil and seed. His employees are partners in the venture: They get a share of the produce under the prevalent practice of bhagidari (sharing). To win them over to his management style, Chaudhary has devised a matrix of 100 points. A score of 70 plus gets a bonus; below 50 percent earns a penalty. So far there have been only winners.

We are discussing Lady Rosetta at the Rajpath Club in Ahmedabad. It is a potato variety high in solids and low in sugar, and named after its bashful skin. Chaudhary's cultivated lady is for Chandubhai Virani of Rajkot's Balaji Wafers. PepsiCo is also a suitor. (For fries, the varieties are long, not round, like Innovator and Kennebec). The yield this year was 67 tonnes a hectare. Chaudhary says he has 1,400 tonnes in cold storage. At the current price of Rs 14 a kg, the stock is worth Rs 1.96 crore. That is a near 300 percent return in just 120 days on investment of Rs 52 lakh.

Banaskantha has known potato farming from the days of the British Raj, but it is Canada's McCain Foods, the family-owned global supplier to McDonald's, and a seller of own-brand wedges, fries and tikkies, that has taught farmers here to grow them scientifically. McCain followed McDonald's to India in 1998. It worked on potatoes in Punjab, Haryana and Uttar Pradesh but found the cold weather inhibiting weight gain and adding sugar (which caramelises and turns fries dirty brown). West Bengal, like Gujarat, has the ideal climate, but plot sizes are too small for contract farming, so it gave up trials about three years ago.

McCain found enormous waste in Gujarat. Flood irrigation was the practice; the water flushed would add up to a 750 mm column by the end of the crop season. But potatoes need moisture, not drenching. Just as much water should be replenished as evaporates from soil and transpires through leaves.

Farmers lavished nitrogenous fertiliser to make up for the nutrient leaching through the sandy soil. High humidity brought pest and fungal attacks.

McCain persuaded farmers to use sprinklers, cutting water and nitrogen use by a third. They are commonplace now, aided by government subsidies, and eight-hour rationed power supply to the farm grid. How long the sprinklers should be on is determined by data provided by the company's two weather stations, one at a spot on the way to Mt Abu (in Rajasthan), and the other at Himmatnagar in Sabarkantha district. Through phone calls and text messages, field staff convey the information to farmers. Other innovations have reduced planting time and energy use in cold storages.

McCain began contract farming in 2006 with four farmers and 16 acres in Badgam village. Today, 900 of them assure it a produce of 4,500 acres. The landholdings in this area are quite big. Half the farmers own more than 10 acres each. But everyone, small or big, is invited, says procurement officer Gopal Dass Sharma, who is known to be free with agronomic advice even to farmers not on contract. The company's plant at Mehsana has an appetite of 50,000 tonnes a year, most of which is mopped up from within the vicinity.

In November, at the beginning of the potato season, farmers sign a contract pledging to supply at least 10 times the quantity of seed by the third week of March, after which purchases stop. The quality parameters are specified; a detailed schedule of farming practices, written in Gujarati, is provided for each variety of potato. Agronomic advice is also available on call. Farmers get seed spuds for half the price; the rest is deducted from the sale price. If farmers default, post-dated cheques are encashed.

Farmers start with McCain and, like Parthi Chaudhary, move on within a few years, after they get a hang of the art. Often they grow for multiple buyers. Unlike McCain, PepsiCo and Balaji Wafers buy through agents, who are paid a fee for seed supplied and potato procured at a price announced at the beginning of the season. These vendors dip into the open market if procurement falls short of contracted quantity.

An amalgam of factors—a law that allows farmers to sell directly rather than through mandis; a choice of buyers; a rash of cold storages incentivised by subsidies and regular power supply; a network of good rural roads and access to information on the internet and the mobile phone—has given farmers better control over their lives.

The narrative of agriculture as a basket case, of farmers ruthlessly exploited by rapacious Indian and foreign capitalists, agrarian crisis brought about by globalisation, and a countryside stalked by suicids, breaks down in Gujarat's potato belt. Small farmers like Manjibhai Chaudhary have gone entirely commercial. He buys wheat from the market, rather than growing it. From one-and-a-half acres to 13, he has been won over completely by potato.

His neighbour Meghrajbhai Chaudhary finds potato cultivation majedaar (fun), proof of which is the 30 of 35 acres devoted to the crop. Prosperity allows him to indulge idiosyncracies like a 'farmhouse' built atop a 30-foot-tall godown, for a vantage view of fields.

Farmers like Kantibhai Becharbhai Patel try to maximise earnings by growing for two companies. One for assured income and the other to skim the cream, if prices jump. An MSc in rubber and plastic technology, he finds corporates better at spreading agricultural technology than government agencies, because of aligned interests. They, like him, are keen to boost yield. His has gone up by a third to 45 tonnes a hectare with their advice. This has made him a votary of privatisation.

With agriculture profitable, youth have taken a shine to it. Bhavesh Saini, a student of chemical engineering from the Nirma Institute of Technology, prefers faming to a salaried job. Originally from Haryana, he finds cultivating the family holdings of 60 acres “creative”. He is monogamous, married to McCain, so that he can “concentrate on production”. But he finds the company’s seed rather expensive. Saini does not care for subsidies, so long as the government “maintains the water table”.

Sumit Joshi of Daniya village is another youth from a family of cultivators who had taken to “systematic farming” in the past two years, after shutting down his business of trading in farm inputs. He owns less than five acres, but boosts bargaining clout through collective action by joining hands with a dozen friends when approaching buyers in the open market. They have not felt the need for co-operatives or farmer-producer companies.

Studies by economist Ashok Gulati, chairman of the Commission on Agricultural Costs and Prices, which fixes support prices for crops, have shown that growth in agriculture is more effective in reducing poverty than growth in industry or services. The farmer-corporate compact that one sees in Gujarat’s potato belt is one of the ways of ushering rural prosperity. It is competitive: Higher yields allow farmers to earn more per acre despite the low unit prices which companies seek. It is inclusive. If farm sizes inhibit deployment of machines, the government can help by easing the law on leasing. PepsiCo, which buys three lakh tonnes of potatoes annually, sources much of it from the ‘kitchen gardens’ of West Bengal through ‘aggregators’. The model is scalable, as increasing consumption of fries and wafers raises demand for potatoes. And it is sustainable with technology that gets more out of less.

This is a model that can work elsewhere and with other crops as well. The Gujarat government is using a variant (without contract farming) to move tribals above the poverty line. Since 2007, under Jeevika and Project Sunshine, it has tried to raise the incomes of tribals by persuading them to grow higher value vegetables and shift from desi maize to high-yielding hybrids. The government buys seeds from private companies and distributes them at a deep discount (along with fertiliser) through NGOs with a record of service. The latter are also required to guide the tribals in new farming practices. A compact agency, outside the government, with professionals engaged for the duration of a project, monitors the programme. The idea is to lubricate the entry of private companies so that they set up distribution networks once a critical number of tribal farmers convert to smart agriculture.

But changing mindsets is not easy. In the potato belt, most farmers still grow table varieties. Parthi Chaudhary blames them for lacking the discipline to meet corporate quality standards.

It seems Lady Rosetta will take some more wooing.
This article appeared in Forbes India Magazine of 09 August, 2013