

THE FIELD SUPPORT PROGRAM
LEARNING ON OUTGROWING INITIATIVE

A CASE STUDY
ON
THE PEPSICO FRITO-LAY POTATO
OUTGROWER PROGRAM
INDIA

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Abbreviations

AFE	Action for Enterprise
AM	Assistant Managers
CF	Contract Farming
CFs	Contract Farmers
FA	Field Assistants
MoU	Memorandum of Understanding
MT	Metric Tons
NGO	Non-Governmental Organization

Executive Summary

PepsiCo Frito-Lay, a pioneer in the field of contract farming (CF), first established outgrowing operations in India in 1989. Although PepsiCo does not work with development organizations in support of its CF operations, its years of experience and the story of its India program provide many lessons learned and can serve as a model for other companies that may be thinking about developing CF operations.

Depending on the season, PepsiCo contracts up to 1,200 outgrowers / contract farmers (CFs) in order to procure more than 10,000 MT of potatoes for its chips factory (Lay's Potato Chips). To ensure the quality and quantity of supply needed, each year PepsiCo increases the benefits and incentives to farmers. At present, PepsiCo supports CFs by:

- Providing good quality seed
- Providing trainings and technical advice to improve yield
- Gathering soil samples and sending to chemical companies for analysis
- Organizing bulk purchase prices of fertilizers for farmers
- Linking farmers to bank loans with reduced interest rates
- Arranging appropriate chemical kits from a reputable company
- Orchestrating crop insurance for CFs
- Paying a fixed buy-back rate so farmers can easily calculate projected income for the season
- Providing farmers with a reliable, steady market
- Providing additional financial incentives.

PepsiCo feels that even if companies cannot provide such generous packages to CFs from the start, they should realize the importance of having strong relationships with farmers and building those relationships incrementally, starting simply with:

1. Training, *hand-holding* and technical assistance
2. Quality seed farmers can trust.

According to PepsiCo management, its outgrower operations are successful because of its ***relationship with the farmers*** with which it works. As described throughout this case, PepsiCo builds a relationship with each farmer by providing a series of benefits that include arranging loans for them and the provision of chemical kits and crop insurance in addition to affordable, good quality seed and technical assistance. Together, these benefits have resulted in a 30% increase in productivity, very few outgrowers who side-sell and many who provide the product quality and quantity that PepsiCo needs.

1. Introduction

The following is a case study of PepsiCo Frito-Lay and its potato outgrowing operations in Pune, India. The case provides an overview of the market and PepsiCo operations and looks at the organization's primary incentives for initiating and maintaining contracted outgrower relationships. The case also presents the key attributes that result in the continued success of its outgrower activities and the outstanding challenges that lie ahead for the company.

2. Description of PepsiCo Frito-Lay, Pune, India

Since entering India in 1989, PepsiCo has grown to become one of the nation's leading food and beverage companies. PepsiCo's food division, Frito-Lay, is the country's leader in the branded salty snack market. PepsiCo's three food processing and packaging plants manufacture Lay's Potato Chips, Cheetos, Uncle Chipps, Kurkure and Quaker Oats. The Frito-Lay India division employs over 48,000 people in India and generates over \$1 billion USD in business.

PepsiCo has long been, and continues to be, a pioneer in the concept and implementation of CF, under which the company transfers agricultural best practices, inputs and technology to farmers. To guarantee quality inputs, particularly seed, PepsiCo established a 27-acre research and demonstration farm in Punjab, Northwestern India, to conduct trials of new varieties and produce seed for various crops. Under this program, PepsiCo has evaluated:

- Several varieties of basmati rice
- 25 varieties and hybrids of corn
- More than 60 varieties of peanut
- More than 100 varieties and hybrids of tomato
- Over 200 varieties of hybrid chili.

Regarding potatoes, PepsiCo has introduced six high-quality, high-yield varieties to more than 10,000 farmers working in over 10,000 acres across Punjab, U.P., Karnataka, Jharkand West Bengal, Kashmir and Pune, Maharashtra.

PepsiCo began CF operations in the Pune area in 2001, procuring just 50 MT. In 2008, its outgrower operations produced more than 10,000 MT. There are three seasons for potatoes—kharif (July-August sowing), late kharif (late sowing in September) and rabi (October-November sowing, irrigation required). The number of CFs varies from season to season (as do the conditions of their contracts). In kharif and rabi seasons, there are about 1,200-1,500 CFs while during late kharif there are only 200 CFs. Each farmer has an average of 1.5 to 2 acres, though some have as many as 12-15 acres. Currently, three potato varieties are grown in this region and yield is approximately 7.5-8 MT per acre. Three assistant managers (AMs) and eight field assistants (FAs) collaborate with 20 plus lead farmers (*Hundekaries*) on overseeing the Pune CF program.

3. Incentives for Outgrowing

PepsiCo sites one simple reason for procuring potatoes through CF—it ensures that quality potatoes are always available. PepsiCo outgrowers purchase premium quality seed that PepsiCo grows in its Punjab operations; this ensures the seed is pure with no mix in variety and is disease free. PepsiCo distributes this highly dependable seed to its farmers to assure its food processing and packaging plants receive both the quality and quantity of potatoes they need (quality seeds also result in better yields), another key to its success.

Sixty to seventy percent of the potatoes procured in Pune are from CFs, with the remainder procured on the local open market. In the near future, PepsiCo intends to move to procure 100% of its potatoes from CFs, particularly because the local open market quality is inferior and the price difference is not significant.

At the moment, PepsiCo is limited in its ability to increase its CF operations in the area due to the limited availability of its own quality seed. In 2003, PepsiCo estimated how much seed it would need, but its potato snack business has grown faster than projected and consequently now it does not have enough of its own seed for the greater than projected number of farmers it works with, forcing PepsiCo to purchase additional seed on the open market.

4. Structure of Outgrowing Operations

4.1. Organization

Management

As mentioned above, PepsiCo has three assistant managers, supervised by the General Manager of Operations who oversee CF operations. Eight field assistants, agro-consultants paid as contractors rather than as employees, support the AMs. The managers and FAs are responsible for 100 to 1,500 CFs at a time, depending on the season and they oversee and facilitate the procurement of 10,000 MT of potatoes per year. FAs are responsible for overseeing the fields of six to seven villages each.

PepsiCo Advice: Field assistants should have technical experience in potato cultivation and be able to train others effectively. If they are not very experienced, they should at least be from the growing area and know the local conditions and people. Train the field assistants—provide them opportunities to improve their skills and knowledge.

These AMs and FAs are responsible for:

- Projecting and suggesting the purchase price (i.e., buy-back rate) to upper management, basing projections on experience and expectations
- Selecting and signing contracts with outgrowers
- Distributing seed to farmers
- Training CFs both formally and informally throughout the season
- Monitoring fields and providing appropriate technical support
- Establishing procurement schedules and procuring potatoes
- Using on-site labs at the field office and factory to determine quality
- Overseeing procurement and payment processing for the CFs.

The AMs and FAs manage contract growing in two areas outside Pune—Sagao and Satara. They operate out of the field office in Sagao, PepsiCo’s chips factory and operations site and occasionally from informal locations in Satara. PepsiCo uses field offices to distribute purchase orders to farmers and distribute seeds and laboratories are located at each field office to test the potatoes and determine quality.

Hundekaries – group leaders and knowledge transfer agents

A key to managing PepsiCo’s outgrower program is the presence of hundekaries, lead farmers and/or intermediaries – some may not farm – who serve as group leaders and agents who transfer knowledge to farmers. One hundekari may work with up to 150 farmers, though most work with 10-15. About 20 hundekaries work with 1,500 farmers in the Sagao area during prime seasons.

Hundekaries coordinate procurement for which they receive a 9% commission per kilogram. To encourage group members to join them, a hundekari facilitates the transfer of knowledge from PepsiCo AMs and FAs, organizing logistics for PepsiCo’s formal trainings, coordinating attendance by CFs and non-CFs, arranging for an appropriate venue and often providing tea at the occasion at their own expense. When organizing such group events and making field visits, hundekaries also work with non-CFs, recognizing this as an effective way to recruit more group members for the future.

In addition to receiving a procurement commission, hundekaries also receive a seed distribution incentive, usually 1% (or 0.05-0.10 rupees/kg). Some hundekaries have made this intermediary position quite profitable, for instance a lead farmer in Satara with 400 CF clients has worked with PepsiCo for three years and has employed four local assistants to help him service them.

4.2. Method of Selecting Outgrowers

Depending on the season, PepsiCo contracts with anywhere from 100 to 1,500 CFs per area (Sagao and Satara). On average each farmer has 1.5-2 acres though some may have up to 12-15 acres under cultivation.

PepsiCo selects CFs first by determining an appropriate area where soil and climate are conducive to growing potatoes profitably. Because yield is key to successful CF operations, these factors must be considered. Recent drought in some areas, including Satara, resulted in a severe reduction in the number of farmers contracted (from 1,200 CFs in 2007 to 118 in 2008).

PepsiCo Advice: Start in areas where producers are already active and select a limited number of farmers. PepsiCo began in 2001 with 25 farmers and 58 acres under contract.

PepsiCo also recruits new CFs based on a referral system. Progressive farmers may suggest and/or select other farmers for inclusion in the program. In addition, PepsiCo has a strong reputation in the area, which attracts good farmers through word of mouth.

4.3. Procurement / Distribution of Seeds and Inputs to Farmers

As stated above, PepsiCo supplies all outgrowers with its own high-quality reliable seed, grown at its Punjab operation. The amount of seed produced is based on projections made five years ago when PepsiCo began cultivating its own seed. Now, however, the need is greater than the available seed and the company must purchase potatoes on the open market. Realizing that its CF operations provide the best quality potatoes, PepsiCo's goal is to become 100% reliant on CF for its potatoes.

PepsiCo Advice: It is difficult for a small-scale operation to have its own seed program; developing one is a huge investment that can take 2-3 years to get going. It is not necessary to have your own seed program, but when working with existing seed producers, you need to ensure that they are reputable.

Initially, PepsiCo offered seed on credit, then on partial credit; eventually it required cash payment. PepsiCo advises others to begin by charging a premium to avoid side-selling of both seed and potatoes by CFs (5% of CFs side-sell seed).

Currently, CFs must pay-in-full when they receive the seed. To facilitate financing for CFs (and ensure payment for inputs sold to them), PepsiCo signed an MOU with the State Bank of India whereby the bank 1) makes loans to PepsiCo's CFs and 2) pays PepsiCo

directly for seeds it sells to CFs by adding the cost to the farmer's loan.

PepsiCo distributes seed through field offices not far from farmers' fields; farmers transport the seed to their fields from that point.

4.4. Coaching / Training Contract Farmers

PepsiCo organizes two major trainings every year: 1) pre-sowing training (including seed handling and land preparations) and 2) pre-harvest training. PepsiCo staff find that visuals such as drawings and pictures are the most effective tools for training and trainers incorporate audio-visual presentations and banners into their trainings and sometimes post several signs around villages.

PepsiCo develops some specific training materials for field staff to use in conducting their trainings and they also use training materials developed by the government and available on its website. Field staff adapts to changes and provides supplementary impromptu trainings to address pressing issues that farmers raise. They also encourage non-CFs to attend the trainings; PepsiCo views them as potential CFs and understands how a neighboring farmer's crop can affect the health of a CF's crop.

PepsiCo Advice:

- 1) Training information should be specific and not too broad!
- 2) Design modules / training materials with lots of visuals!
- 3) Select the top three practices you want CFs to focus on, develop a training strategy and train them in these three points.
- 4) Don't just do company-mandated trainings; be open to impromptu trainings that address urgent issues on the spot—in other words, conduct needs-based training in the field!

Package of Practices

PepsiCo has developed a series of technical practices – a *Package of Practices* – which AMs and FAs use in training CFs. There are more than 30 practices and each year the assistant managers and field assistants select from 3-10 key practices for farmers to focus on. Experience shows that only 30-50% of CFs follow what is taught in the trainings and PepsiCo encourages trainers to work with CFs on implementing just a few key practices at a time because trying to get farmers to learn and adopt many new practices at once is less likely to succeed.

Training topics include recognizing and treating diseases, managing pests, managing production costs, calculating expected loss, soil testing and both the wrong and right ways of doing things.

4.5. Technical Assistance / Monitoring of Contract Farmers

Not all training is formal and PepsiCo views the first training with farmers as an ice breaker and requires field assistants to then spend quality time in the field with them, providing support and building relationships.

PepsiCo Advice:

- You go to the farmer – get out into the field!
- Work with farmers on solutions to problems
- Remember—the farmer knows more than you do!

DuPont, an international input supply company with extensive operations in India, provides CFs with both *chemical kits* and training and technical assistance, as needed, particularly when chemical application is advised (see *Chemicals for CFs* in section **4.8. Incentives for Farmers**). PepsiCo field staff work hand-in-hand with the DuPont field staff to ensure CFs receive needed support throughout the season.

In addition to training, demonstration plots also play a vital role. According to PepsiCo, one of the most effective training methodologies is to have successful farmers tell their stories to others. PepsiCo emphasizes a strategy of supporting farmers through 50% visual training and 50% field assistance.

4.6. Contracting and Pricing Strategies

PepsiCo's standard outgrower contracts are specific to each season and are edited and signed annually by CFs. Due to the variability of the procurement price (buy-back rate), incentive packages, recommended chemical kits and whether farmers take a loan, PepsiCo does not engage in long-term contracts with CFs.

From May to June each year, AMs & FAs estimate the expected procurement rate and contract conditions, first calculating the expected costs of production for the season. For instance, a season that normally has less rainfall requires more irrigation, which increases cultivation costs.

In these instances, PepsiCo pays a higher buy-back rate to compensate for the increase in production costs (estimated at 25,000 rupees per acre in 2008).

Agents also calculate buy-back rates to encourage farmers to stagger their harvest dates in order to make the post-harvest procurement system more manageable; it also means that sowing dates must be included in the contract.

PepsiCo Advice: If your objective in starting up a contract farming operation is to pay a lower price for product, you are doing it for the wrong reason! The goal should be to get quality potatoes and your buy-back rate should be set at or near market rates.

Field agents must take the market into consideration when calculating buy-back rates. This includes reflecting on the previous year's rate and projected market requirements. PepsiCo has learned that a price 10-20% lower than the market price can be acceptable to CFs as the growers see the value in the additional assistance PepsiCo provides as well as the high productivity of the seed they receive (additional incentives are described below). But, if there is a difference of 25% or more, the CFs may well be tempted to sell their potatoes on the open market, thus breaching their PepsiCo contract. In this case, the company may

move the buy-back rate closer to the market rate or compensate through other incentives. At least once in the past, PepsiCo added 1.5 rupees per kilogram when the market price was significantly higher. Although it did not match the market price, it compensated for the significance in discrepancy. It should be noted that PepsiCo's package of benefits is exceptional relative to what smaller companies may be able to offer and a 20% deviation from market price often is acceptable to its CFs, where it would not be for CFs working with other companies.

PepsiCo insists that the buy-back rate be fixed in the contract with no mention in the contract that the rate is subject to change. This protects the company from disputes over market fluctuations and makes clear to farmers what they can expect to receive for their labor and investment. There is no wonder, fear or hope for what the market may or may not pay at the end of the season.

Contracts are signed for a period covering the duration of the season with each individual contract farmer. PepsiCo does not make agreements with group leaders though it does allow them with cooperatives.

PepsiCo also has a very strict policy regarding contract violations. The General Manager advises companies engaged in outgrowing operations to *be ruthless* when it comes to this issue. PepsiCo permanently black-lists anyone who is caught breaching their contract and side-selling their potatoes and there are no exceptions; approximately 3-4% of PepsiCo CFs side-sell during a given season.

In addition to the buy-back rate, the contract clearly lays out additional financial incentives for farmers (see section **4.8. Incentives for Farmers**); includes the standards potatoes must meet to be accepted and purchased and contains a letter of indemnity stating that the farmer will comply with the contract and not hold PepsiCo responsible for any loss. Another feature of the contract is an *Irrevocable Letter of Authority* allowing PepsiCo to make a direct payment to the CF's

bank following procurement of the potatoes, which enables the bank to deduct any loans made to the CF before depositing sales proceeds to an account.

4.7. Procurement operations

According to their contracts, outgrowers bring their harvest to the field office and/or designated stations for grading and sale. Until the lot has been properly assessed (graded and tested) and the proper paperwork has been signed and handed to the outgrower, the lot remains in the possession of the outgrower. Once PepsiCo takes ownership at the field office, the company then takes responsibility for transporting the produce to the factory near Pune.

PepsiCo conducts tests on samples from CFs' harvests to evaluate potato dimensions, disease, defects, dry matter and sugar content and assesses them against the contract standards. PepsiCo rejects potato lots not meeting these standards and does not purchase them. For lots it purchases, PepsiCo requires 15 days to process payment from the procurement date. For CFs with loans, the payment is made by wire transfer directly to the bank, which immediately recoups its loan and interest (as per the MOU with PepsiCo).

4.8. Incentives for farmers

CFs cite numerous reasons for working with PepsiCo, which:

- Provides good quality seed
- Provides trainings and technical advice to improve yield
- Gathers soil samples and sends to chemical companies for analysis
- Organizes bulk purchase prices of fertilizers for farmers. PepsiCo buys fertilizers in bulk and resells to CFs at basically the same rate it purchased them
- Links farmers to bank loans with reduced interest rates
- Arranges appropriate chemical kits from a reputed company
- Orchestrates crop insurance for CFs
- Provides additional financial incentives for farmers following PepsiCo's Package of Practices (see training section below for description).

Loans to CFs

Since 2006, PepsiCo has signed an annual MOU with the State Bank of India where the bank agrees to provide loans to PepsiCo CFs under terms and conditions negotiated with the company. The agreement, arranged between the corporate offices of the bank and PepsiCo, can be terminated with 30 days notice. The premise of the agreement is that PepsiCo agrees to make a direct payment to the bank following procurement of the potatoes if the bank gives a loan to the farmers. This allows the bank to automatically recover any loans made to PepsiCo CFs, so long as the CFs sell their potatoes to PepsiCo as agreed in their contract.

The MOU details the amount of the loan per acre and clearly states that the money goes to the individual farmer only and not to a hundekari or other middleman. To get the loan, as per the MOU, CFs simply show a record of land ownership and write personal declarations that they owe no money to other banks in India. The MOU also states that if an outgrower takes a loan, s/he is required to get crop insurance, seeds and the chemical kit PepsiCo recommends. This

benefits both PepsiCo and the bank because it ensures that farmers have the inputs and insurance they need to provide quality potatoes and not default on their loans. The MOU further states that upon immediate disbursement of loans to farmers' accounts, payments due to the following companies will be automatically withdrawn and electronically transferred to the respective companies' accounts:

- a) PepsiCo for seed
- b) the insurance company for crop insurance
- c) the chemical company for pesticides.

Farmers can withdraw only the remaining funds for labor and other farm costs.

The bank benefits because PepsiCo not only brings in thousands of clients, it also does marketing and, quite frequently, the necessary paperwork as well. The local branch had 1,200 PepsiCo CFs the previous year with an average of 95% of PepsiCo CFs taking loans with their bank. The Hundekaries also play a role by handling most of the paperwork with the farmers, so the bank branches do not have to deal with each individual farmer even though bank accounts are in individual names. The State Bank of India has reported low default rates because of this agreement (5% average) and those who do default are denied a loan the following year.

Farmers not associated with PepsiCo usually must borrow from a local money lender and pay much higher interest rates and if they take a loan at the bank, they must provide more paperwork, including proof from all other banks in the area (with official stamps) proving that they do not owe them. If they are successful in securing a bank loan, the interest rate is 11% and they can borrow only 18,000 rupees per acre. Under the PepsiCo / State Bank of India agreement, CFs get an interest rate locked in at 7%, can borrow up to 25,000 rupees per acre, and can self-declare themselves debt-free for loans of up to 50,000 rupees.

The terms of the MOU between PepsiCo and the bank are revised annually to adjust to changing production costs. In the future, PepsiCo plans to work with the bank to provide ATMs in rural areas to make funds and payments even more accessible for CFs.

Chemicals for CFs

PepsiCo also has an agreement with DuPont to provide:

- 1) Chemical kits (pesticides, insecticides, etc.) to CFs per PepsiCo requirements
- 2) Services and equipment embedded in the cost of chemical kits that includes staff for trainings and field visits, protective clothing for farmers and sprayers / nozzles (in the past, DuPont provided one power sprayer good for three years of use for every 200 CFs).

PepsiCo determines the contents of chemical kits and price annually. Kit contents vary from season to season and location to location and are based on historical experience, some trial and error and field representative suggestions. Mite-treatment chemicals are included because it is better to risk paying for unused chemicals to ensure they are on-hand if needed since the window of opportunity to treat the mites is small. In 2008, it the kits contained twelve items.

Although the kits also contain some products DuPont does not make, its MOU with PepsiCo states that DuPont is responsible for negotiating the inclusion of these other products into their kits.

CFs who take a bank loan (95%) are required to purchase the DuPont chemical kit. The remaining 5% are not required to purchase the kit, but are strongly encouraged to do so. If farmers buy chemicals on their own, they usually pay 10-15% more for the same products. As farmers are price sensitive, PepsiCo aims to create a kit that is appropriate for farmers' needs. If

DuPont Advice: In addition to chemical kits, services are essential and chemical companies should take responsibility for proper application of their products to ensure a good yield. Also key is continuous communication with farmers—regular field visits, especially during chemical application is critical. Farmers don't really care if you come to their fields if they are not having problems, but if they are having problems, they are extremely sensitive if you do not visit.

they include too much, which increases the cost, CFs may not want to buy it or may cut costs by not applying products or purchasing poorer quality chemicals at a lower price and reselling the kits they are required to buy. In addition to the basic DuPont kit, CFs may need to purchase other chemicals in the marketplace.

By partnering with PepsiCo in this way, DuPont is ensured a customer base of approximately 3,000 farmers each year. Thirty-five percent of DuPont's sales are through the chemical kits to PepsiCo CFs; the other 65% are through retail shops.

DuPont benefits greatly from these chemical kit

sales because with retailers there often is a credit system and it can be difficult to collect payment.

Free training and field visits by DuPont technical staff are included in the purchase of chemical kits. DuPont recognizes that relationships with farmers are extremely important for them as it affects retail sales when additional chemicals are needed. Visiting PepsiCo CFs' fields also builds DuPont's reputation among non-CFs. DuPont usually provides two formal trainings per season with agents making field visits, particularly if there are problems. DuPont also organizes trial / demonstration plots for its new products and hundekaries help set up field meetings / trainings for DuPont agents. PepsiCo provides DuPont with the entire CFs database so it can follow-up with farmers directly, although they usually work together. One DuPont field agent manager may have 50-60 farmers in two to three villages to visit, while regular field agents might service 150-200 farmers in a season. They see the same farmer every five to six days.

A challenge DuPont faces is that CFs expect chemical kits to be sufficient for all their farming needs in a season. Under normal circumstances they are, but fluctuations in weather or diseases can mean more chemicals are sometimes necessary. Additionally, if CFs do not get the results they want following the trainings, they can get upset. As DuPont agents cannot be there for all applications to ensure farmers are following the practices taught in the training, the relationship with farmers can be strained. Despite these challenges, PepsiCo, DuPont and the CFs all benefit from these agreements.

Insurance for CFs

PepsiCo also negotiates crop insurance for its CFs. As stipulated in the MOU between the insurance company and PepsiCo, the insurance company generally reimburses the cost of lost production so the farmers do not lose money spent. The average premium is set at 900 rupees per acre and for CFs who opt for a loan, their bank pays the insurance company upon disbursement

of the loan. Although CFs who do not take loans are not obliged to buy insurance, approximately 99% of CFs get the insurance, including those who do not take loans.

Additional financial incentives for farmers

Financial incentives for farmers are established at the time of contracting and occasionally just before harvest. These financial incentives are established to motivate farmers to continue positive behaviors and discourage negative practices. Incentive packages can vary year to year and may depend on the length of time outgrowers have been engaged in contract farming with PepsiCo. For example, in the first year, a new outgrower will receive a financial incentive to encourage the use of the chemical kits. Other incentives offered to all farmers, such as those based on the number of kilograms with a high solid (dry matter) percentage or high purity (minimal defects). There typically is a *Loyalty Incentive* for farmers who contract for two to three years or more. All incentives are based on per kilogram amounts (not lump sums).

In the past, PepsiCo provided incentives based on a multiplication ratio (increase in yield per acre), but discontinued this incentive as farmers found ways to cheat on the measurements to ensure higher payouts. Disincentives for CFs are limited to the attraction of a potentially higher market price on the open market, especially when loans must be repaid. To reduce the temptation to sell on the open market, PepsiCo ensures CFs understand the long-term ramifications, including through permanent black-listing of those caught breaching contracts by side-selling.

5. Fundamentals of Success

According to PepsiCo management, the number one reason its outgrower operations are so successful is its *relationships with the farmers*. As described throughout this case, PepsiCo builds its relationships with individual farmers by providing benefits such as arranging loans, chemical kits and crop insurance to providing affordable, high quality seed and technical assistance that result in a 30% increase in productivity. In return for these perks, few outgrowers side-sell and most provide the quality and quantity of produce that PepsiCo needs.

6. Biggest Challenges

Having overcome numerous challenges through the years, PepsiCo is well positioned to move into the future. Currently, the primary challenges lie mostly in rising fertilizer costs, drought and the need for better crop insurance, all of which can lead farmers to default on their contracts and produce insufficient quantity and quality potatoes.

Recent droughts have forced PepsiCo to reduce the number of farmers in the Satara area and it now works with just one in ten of the farmers they contracted with in the past. Normally, there are 1,200 CFs in the area, but in 2008 PepsiCo cut the number to 118. Urban encroachment also is becoming a problem, as farmlands are converted to industrial, business and residential use.

The government is providing additional challenges, recently writing off all debt nationwide for farmers who think the government will do the same in another three to five years. One outcome of these actions is that farmers are more likely to default on their loans and side-sell PepsiCo seed and potatoes.