

Results of Working Group
3 August 2009

Company Strategic Plan for Contract Farming Operations

Goal of Company Contract Farming Operations

- Be a leader in the potato industry in Bangladesh

Objectives of Company Contract Farming Operations

- Integrate operations of seed, contract farming, cold storage, and processing operations
- Ensure that there is a constant supply of appropriate inputs for the proposed potato chip factory
 - New processing varieties are newly available need to multiply
 - Raise awareness of the new varieties, among farmers
 - Establish a base of contracting farming for the future, by the third year so it is ready to supply processing operations

2009 Specific Objectives

- Explore and secure sources of finance
- Explore why potato has lower dry matter in North Bengal than in Munshiganj in trial plots from last year and the effects of different chemical fertilizer on dry matter
- Improve monitoring of farmers' activities

Size and Markets of Contract Farming Operations

- Increasing the scale of outgrowing operations from last year (600 Acres => ~4,100 MT)
 - Own processing operations
 - 1,000 MT for French fries
 - *11,000 MT per 1 shift per 200 days for chips in the future*
 - Sell to other processing companies
 - 1,500 MT
 - Seed potatoes for own use
 - 708 MT (*new initiative*)
 - Table potatoes open market
 - 500 MT
 - Explore export and other alternative markets

Potential Risks & Challenges

- Unfavorable weather
- Problems with seed
- Establishment of production in new areas can have some similar problems to last season in terms
- Convincing farmers to grow diamante can be difficult, because of farmers' preference for granola

Why Will Farmers Join Contract Farming Operations?

- Quality seed provided on credit
- Training support
 - 1 training sessions
- Credit support
 - 8,000 BDT
- Technical support
 - Production manual
 - Expert consultations
 - Regular field visits by field supervisors & manager
- Secured market
 - Buy-back guarantee
- Demonstration of modern production practices
- Support allows them to expand production

Risks to Farmers

- Farmers may not be able pay back credit
- Low production yields
 - Weather
 - Mismanagement
 - Low quality inputs (adulteration)
- Farmer cannot secure additional credit for production
 - Labor
 - Additional inputs
- Once production moves to Lady Rosetta and Courage in 2010, there may be issues with selling rejected amounts on the local market (may get a lower price)
- Potential lower local market prices because last year's high prices may encourage over production
- Contract farmers producing seed may face problems in repaying credit because of unexpected issues which may come up from starting a new type of contract farming operation, and there is not a ready alternative market for Courage and Lady Rosetta seed potatoes

Direct or Indirect Model?

- Direct model
 - Reduce problems with expert farmers
 - Need to rethink staffing arrangements so field staff can provide all facilities

Projected Costs of Contract Farming Operations

Particulars	Birgonj	Thakurgaon	Bottoli	Shibgonj	Gobindaganj	Upson	Total
Blocks	17	2	2	1	1	1	24
Land-Acre	425	50	50	30	25	20	600
Total Cost	36,888,696	4,907,449	4,316,137	2,580,092	2,183,134	1,799,196	52,674,703
Interest (Effective Rate of 10%)	3,688,870	490,745	431,614	258,009	218,313	179,920	5,267,470
Store Rent	7,482,619	916,667	916,667	550,000	458,333	366,667	10,690,952
Total Cost with Interest	48,060,185	6,314,861	5,664,418	3,388,101	2,859,780	2,345,782	68,633,126
Potato Received from Contract Growers							
Potato Received in kg	2,857,000	350,000	350,000	210,000	175,000	140,000	4,082,000
Potato Received in bag	34,012	4,167	4,167	2,500	2,083	1,667	48,595
Potato Cost							
Potato Cost in kg	16.82	18.04	16.18	16.13	16.34	16.76	16.81
Potato Cost in bag	1,413	1,516	1,359	1,355	1,373	1,407	1412.34

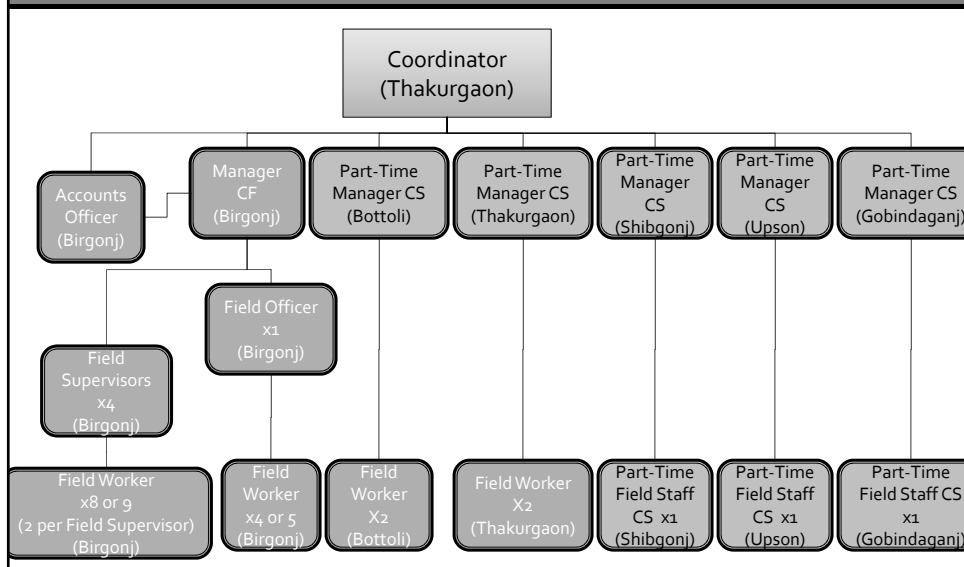
Staff Required, Organogram, Qualifications, & TORs

Staffing Needs

Staff Required

- Approximately 25 full-time staff and 8 part-time staff
 - 1 Part-Time Coordinator
 - 1 Manager – 15,500 BDT
 - 1 Accounts Officer – 6,500 BDT
 - 4 Field Supervisors – 4,500 BDT
 - 12-13 Field Workers (Processing Variety) – 3,500 BDT
 - 1 Field Officer (Seed) – 8,500 BDT
 - 4 Field Workers (Seed) – 3,500 BDT
 - 5 Part-Time Managers (from Cold Storage operations)
 - 3 Part-Time Field Workers (from Cold Storage operations)

Organogram



Managers' Qualifications

- Previous work experience in managing contract farming (3-5 years)
- Previous experience with potato cultivation
- Minimum graduation
- Experience managing procurement
- Previous experience negotiating agreements
- Experience with MS Word and MS Excel
- Previous experience conducting trainings
- Good communication skills

Managers' TOR

- Area selection
- Land selection
- Farmer selection
- Agreement negotiation
- Soil collection for soil test
- Management of Field Supervisors
- Area distribution to Field Supervisors
- Report writing
- Recruitment
- Management of collection shed
- Regular field visit
- Secure procurement materials
- Provide technical advice to farmers
- Regular communication with Coordinator
- Arrange credit
- Arrange farmer's meeting

Field Officer's Qualifications

- Previous experience in contract farming (5 years)
- Experience with potato cultivation
- Ability to ride bicycle
- Communication skill
- Diploma Agriculture
- Fill out MIS materials by hand
- Leadership experience
- Recruitment experience

Field Officer's TOR

- Directly responsible to conduct field visit to 25 acre regularly
- Conduct field visit to Field Workers' 75-100 acres
- Manage 3-4 Field Workers
- Take responsibility for procurement for block
 - Stay in collection shed
- Provide technical support through one-to-one meetings with farmer
- Attend every weekly meeting
- Assist to deliver inputs and procurement supplies
- Fill out MIS report by hand regularly
- Assist in training
- Communicate regularly (daily) with Manager

Field Supervisors' Qualifications

- Previous experience in contract farming (3-4 years)
- Experience with potato cultivation
- Ability to ride bicycle
- Communication skill
- HSC passed
- Fill out MIS materials by hand
- Leadership experience
- Recruitment experience

Field Supervisors' TOR

- Directly responsible to conduct field visit to 25 acre regularly
- Conduct field visit to Field Workers' 50 acres
- Manage 2 Field Workers
- Take responsibility for procurement for block
 - Stay in collection shed
- Provide technical support through one-to-one meetings with farmer
- Attend every weekly meeting
- Assist to deliver inputs and procurement supplies
- Fill out MIS report by hand regularly
- Assist in training
- Communicate regularly (daily) with Manager

Field Workers' Qualifications

- SSC passed
- Ability to ride bicycle
- Previous experience with contract farming (1 year)
- Experience with potato cultivation
- Fill out MIS report by hand
- Communication skill
- Willing to stay near to the block
- Training experience (*desired quality*)
- Loyalty (*desired quality*)

Field Workers' TOR

- Regular field visit to their 25 acres
- Receive training from company
- Assist in training
- Provide technical support through one-to-one meetings with farmers
- Communicate regularly (daily) with Field Supervisor
- Attend weekly meeting
- Fill out MIS report by hand regularly

Evaluating Field Staff

- Employee evaluation form for Field Supervisors and Field Workers The evaluation will be based on the staff's ability to achieve:
 - Quality of land preparation
 - Activities occurring at appointed time
 - Input application as per suggestion
 - Quantity & time
 - Regular field visit
 - Procurement target
 - Disease free plot
 - Sorting and grading is correct
 - Record keeping abilities

- Coordinator and Manger rate the performance for each task
 - Future incentive program –if employee achieves above 90% of the maximum possible score, they will receive one month basic salary bonus

Contract Farmer Selection

Criteria for Selecting Contract Farmers

- Interested in planting new varieties (processing varieties)
- Experience growing potato
- Own land (50 decimals available for contract farming)
 - High land
 - Sandy soil
 - No disease (bacteria, etc.)
- Financial capability
 - Based on the assessment of Cold Storage and Contract Farming staff
- Be near other farmers (compact)
- Previous performance
 - Prior yield
 - Repayment of loans
 - If failure to pay is due to side-selling etc. then they cannot participate
 - Has not defaulted with other companies
 - Meeting contracted quantity
 - If failure to pay is due to side-selling etc. then they cannot participate
 - Not 'lazy' – prepare land, and cultivate on time and in the correct way
 - Loyal – good listener and implements the correct company practices
- Agree to plant and harvest at the correct time

Company Activities Related to Contract Farmer Selection

- Selection of blocks
 - Compact
 - Near to cold storage
- Search mental record of cold storage staff for farmers who have potato growing experience and may have participated successfully last season in contract farming
- Make a list of potential contract farmers
- Organize meeting with local potato farmers
 - Discuss about varieties
 - Discuss about input support (seed, credit, etc.)
 - Discuss buy-back rate and quantity
 - Discuss technical support
 - Discuss training
 - Discuss potato specifications
 - Request that they plant rice early so that they will be able to plant potatoes on time
 - Discuss about the need to add lime to the soil
 - Provide written regulations
- Select farmers
- Formulate agreement
- Land measurement
- Observe rice plantation to ensure the ability to plant potatoes on time
- Sign contract agreement

Contract Farmer Management MIS Forms

MIS Form	Type of Document	Responsible Person	Submits To
Contract Farmers Card	Manual	FO, FS, & FW	One copy to Farmer & one copy with FO, FS, & FW (Weekly)
Contract Information Book	Book	FO, FS, & FW	One copy to Manager & one copy with FO, FS, & FW (Weekly)
Compiled Block-Wise Report	Manual	Manager	Coordinator (Weekly)
Progress Report	Spreadsheet	Coordinator	MD (Weekly)

Pricing & Procurement

Farmers' Production Costs

- Assumption is that labor cost is high, but the fertilizer cost is lower, so the production will be approximately the same as last year
- Own processing operations
 - 7.5 taka
- Sell to other processing companies
 - 7.5 taka
- Seed potatoes for own use
 - 11.25 taka
- Table potatoes open market
 - 6.9 taka

Pricing of Potatoes

- Own processing operations
 - 10 taka
- Sell to other processing companies
 - 10 taka
- Seed potatoes for own use
 - 12 taka Diamant
 - 13 taka Courage & Lady Rosetta
 - Difference in the price is due to the risk of growing new varieties
- Table potatoes open market
 - 9.5 taka
- Method to change price
 - Will take the average of the fixed price and the market price
 - Will *not* tell farmers about this provision unless necessary

Collection Centers

- Birgonj
 - 5 Collection Centers
 - 4 blocks will have Collection Center outside of Cold Storage
 - 1 inside the Cold Storage
- Thakurgaon
 - 2 Collection Centers
- Shibgonj
 - 1 Collection Center
- Bottoli
 - 2 Collection Centers
- Gobindaganj
 - 1 Collection Center
- Upson
 - 1 Collection Center

Transportation

- Most potatoes are transported by the company to the Collection Center from the field
 - If farmers bring their own produce to the Collection Point, Company pays for the transportation by giving extra price per bag
- Try to deliver to cold storage the same day as purchased from farmer

Grading & Sorting Policies

- Will provide packing materials
 - Gunny bag
 - Lenomash bag
- Contract labor will sort and grade in front of farmer
- ***If seed quality does not match the specifications then it will be considered as table potato or processing potato***
- Testing of potatoes for dry matter content
 - To prepare for next season when payment is contingent on dry matter content
- Weighing of accepted potatoes
- Rejected potatoes are returned to contract farmers
 - Will provide advice as to alternative markets for rejected products and excess supply
- Receiving papers are handed over to contract farmers

Grading & Sorting Specifications

- Processing Variety
 - Size – 60g-above
 - No spots
 - No cuts
 - No skin problem
 - Institute a grading process to select longer potatoes for French fries, and pay an extra amount for those
 - Above four inches
 - 1 taka per kg bonus
- Table Potato
 - Size – 60g-above
 - No spots
 - No cuts
 - No skin problem
- Seed Potato
 - Size – 25g-80g
 - No spots
 - No cuts
 - No skin problem

Payment System

- Farmer receives a receipt from the collection center
 - Collection center supply a list of farmers' receipts to Accounts Department
 - Accounts Officer settled the final payment deducting the cost of seed, loans, interest, etc.
- Farmer delivers receipt to Accounts Department at the nearest cold storage after 3-4 days later
 - Accounts Department submits a schedule to the bank about the daily fund requirements
- Farmer receives a bearer check from Accounts Department for the specified date
- Farmer submits the check to local bank where Company has its account on or after the date on the check
- Farmer receives payment from the bank

Other Procurement Issues

- Marking bag
 - Different colors mean different farmers
- Testing materials need to be procured to test for dry matter
 - Potatoes will be tested at the collection centers in preparation for instituting a new pricing policy in the future where prices are based on the dry matter content of the potatoes
 - Testing will be done between sorting and weighing

Procurement MIS Forms

MIS Form	Type of Document	Responsible Person	Submits To
Procurement Register	Book	FS	Manager (Weekly) One copy to Manager & one copy to farmer (Weekly)
Procurement Receipt	Manual	FS	Accounts Officer (Weekly)
Collection Center-Based Stock Register	Book	FS	Accounts Officer (Weekly)
Central Collection Center-Based Stock Register (Birgonj, Thakurgaon, & Bottoli)	Book	Accounts Officer	Manager (Weekly)
Labor Register	Book	FS	Accounts Officer (Daily)
Labor Master Roll	Manual	FS	Accounts Officer (Twice Weekly)
Shipment Register	Book	FS	Accounts Officer (As Needed)
Chalan	Manual	FS	Accounts Officer (As Needed)
Fund Requisition Book	Book	FS	Manager (As Needed)
Procurement Master Roll	Spreadsheet	Accounts Officer	Manager (As Needed)
Loan Reimbursement Receipt	Manual	Accounts Officer	One copy to Manager & one copy to farmer (As Needed)
Payment Voucher	Manual	Accounts Officer	Accounts Dept. HQ (Every 10 days)
Stock Register for Contract Farming Potatoes	Book	Receiving Manager	Coordinator (As Needed)
Compiled Cold Storage-Wise Report	Spreadsheet	Coordinator	MD (Weekly)
Contract Farming Report	Spreadsheet	Coordinator	MD (Weekly)

Credit

Credit Provided to Farmers

- Seed on credit + 8,000 taka per acre *or* 25,000 taka per acre
 - Fertilizer cost was higher last year
 - Company has already worked with the farmers and has gotten agreement for the reduction in the amount of credit provided

Seed

- Birgonj
 - All seed will be supplied on credit by Company seed project
- Will supply credit to farmers who want to purchase Diamant seed from other companies
 - Shibgonj
 - Bottoli
 - Thakurgaon
 - Upson
 - Gobindaganj

Cash

- 8,000 taka per acre
- 12.5 % flat interest rate
- If farmers do not take seed they will receive a total of 25,000 taka per acre
- Input purchases, labor costs, etc.
- Loans from financial institutions are unavailable for farmers

- The decrease in the amount (from 10,000 taka per acre to 8,000 taka per acre) is due issues with working capital, but if there is any outside financial institutions willing to provide credit the amount may increase

Risks of Providing Credit

- Production failure
 - Could be 'blamed' on the seed
 - Company will only provide its own seed on contract
- Side-selling (less of a problem)
 - Organization
 - Legal stamp contract
 - Farmers will pay the cost of the stamp paper
- Compact land
 - Allows better monitoring which reduces risk

- A 5% non-repayment rate for credit which is incorporated into the contract farming cost estimate

Other Financial Institutions

- PKSF
 - Will provide credit to Company which
 - Company will then manage and provide to individual farmers
 - Payment for potatoes will be made directly to farmers, with the credit and interest deducted
 - Credit will be repaid by Company to PKSF
- Local NGOs
 - Can use its own funds (approximately 20% of total funding) to undertake these types of projects
 - Local NGO will supply funds to Company
 - Company will then provide funds to individual farmers
 - Payment for potatoes will be made directly to farmers, with the credit and interest deducted
 - Credit will be repaid by Company to Local NGO
- Government Bank
 - Company has submitted a proposal to a Government Bank
 - If approved it can serve as a model for other agreements and will help convince other financial institutions that this is a viable opportunity for them to get involved with
- Explore Alternative Institutions
 - World Bank, ADB, etc. next year for alternative loans

- Company wishes to build its experience & credibility before pursuing tripartite arrangements with third parties

Input Supply Companies

- Input supply companies (Bayer & Autocrop) are unwilling to provide credit at this time because Company doesn't have a long enough track record, but after 2-3 years it may be possible to enter into tripartite of direct arrangements
 - UPL – will offer Sulfur & Mancozeb this year at a reduced rate on credit
 - No scope for UPL to deal directly with farmers, and Company prefers to handle these relationships directly
 - If inputs are supplied, then the amount of cash credit supplied to farmers will be reduced accordingly

Credit MIS Forms

MIS Form	Type of Document	Responsible Person	Submits To	Comment
Credit Master Roll	Spreadsheet	Accounts Officer	Manager (As Needed)	
Cash Credit Register	Book	Accounts Officer	Manager (As Needed)	Same register for both cash and seed but different responsibilities
Seed Distribution Register	Book	FS & FO	Accounts Officer & Manager (As Needed)	

Demonstration Plots

Purpose of Demonstration Plots

- Expose farmers to processing varieties of potato
 - Because Company will be releasing Courage and Lady Rosetta variety in 2010, and wants to generate farmer interest in the variety
 - May also act as a *de facto* yield trial plot
- Expose farmers to suggested production practices – especially in the use of seed, fertilizer, pesticide
- Some demonstration plots may be used in part for trial purposes to test yields of different varieties under similar conditions

Number and Location of Demonstration Plots

- Increase the number of demonstration plots – at least 1 per block – to 19
 - Increase the size from 5 decimals to 10 decimals to attract more attention
- Locations
 - 12 – Birgonj
 - 2 – Thakurgaon
 - 2 – Bottoli
 - 1 – Sibgonj
 - 1 – Upton
 - 1 – Gobindaganj

Role of Company in Demonstration Plots

- Select farmer
- Select land
- Supplied own seed
- Purchased and supplied chemical fertilizer and pesticide
- Developed a schedule for activities
- Enforced schedule
- Develop MIS format
- Monitoring visits
 - Field Supervisor – daily
 - Manager – Weekly
- Provide sign-board
- Purchased all production (no deduction)

Role of Farmer in Demonstration Plot

- Provide labor
- Post sign-board
- Land preparation
- Seed cutting
- Planting seed
- Supervise farm daily
- Application of fertilizer, pesticide, irrigation following the schedule
- Inter-culture operation
- Provide organic fertilizer
- Haulm pulling
- Harvest

Ensuring Effectiveness of Demonstration Plots

- Increase the size and color of sign board
- Located within or adjacent to each block to promote the modern practices
- Field days
 - Share cost and yield data with farmer to demonstrate the effectiveness of modern practices
- Soil testing
 - Change the fertilizer dose based on soil test results, and promote this new dosage to nearby farmers
- Field Supervisor will encourage farmers to visit the plot

Demonstration Plot MIS Forms

MIS Form	Type of Document	Responsible Person	Submits To
Demonstration Plot Information Form	Manual	FS	Manager (Weekly)
Demonstration Plot Block Progress Report	Manual	Manager	Coordinator (Weekly)
Demonstration Plot Progress Report	Spreadsheet	Coordinator	MD (Weekly)

Communication

When Will Communication with Farmers Happen?

- Initial individual contact
- Organized meeting
- Signing Contract
- Coaching Session
- Regular Field Visits (by FW, FS, Manager, & Experts)
- Formal Field Days
 - Expose farmers to Courage variety of potato
 - Not at every demonstration plot, but will happen in every growing area
- Informal Field Days
 - One time per month by the invitation of the Field Supervisor to the farmers, but no costs will be covered
- Sorting & Grading
- Payment

Inter-Office Communication

- **Manager**
 - Manager will visit a few blocks on a daily basis
 - Weekly meeting with Field Supervisors and Field Workers
 - Mobile was provided (through an advance) to Field Supervisors and Field Workers
 - Field Supervisor will get 200 taka per month
 - Daily mobile communication with Coordinator
 - Meeting with Managers on monthly basis during the monthly office meeting
- **Coordinator**
 - Direct mobile communication with MD
 - Monthly office meetings

Trial Plots

Two Types of Trial Plots

- Yield Trial Plots (a portion of the total number of demonstration plots)
 - Demonstration plots will test yields of multiple varieties
 - 10 decimals
- Dry Matter Trial Plots (Based on fertilizer use)
 - Thakurgaon – 1
 - These locations were selected because the Company seed expert is based in Thakurgaon
 - 50 decimals (10 blocks per field)
 - 5 MoP
 - 5 SoP

Role of Company in Trial Plots

- Select farmer
- Select land
- Supplied own seed
- Purchased and supplied chemical fertilizer and pesticide
- Developed a schedule for activities
- Enforced schedule
 - Manager will be present at application of all inputs to trial plots focused on the yields
 - Expert from Company will be present when all inputs (especially fertilizer) is applied to the trial plots focused on the dry matter content
- Develop MIS format
- Monitoring visits
- Provide sign-board
- Purchased all production (no deduction)

Role of Farmer in Trial Plots

- Provide labor
- Post sign-board
- Land preparation
- Seed cutting
- Planting seed
- Supervise farm daily
- Application of fertilizer, pesticide, irrigation following the schedule
 - Will be monitored by Manager and/or Expert from Company Seed
- Inter-culture operation
- Provide organic fertilizer
- Haulm pulling
- Harvest

Yield Trial Plot MIS Forms

MIS Form	Type of Document	Responsible Person	Submits To
Yield Trial Plot Information Form	Manual	FS	Manager (Weekly)
Yield Trial Plot Block Progress Report	Manual	Manager	Coordinator (Weekly)
Yield Trial Plot Progress Report	Spreadsheet	Coordinator	MD (Weekly)

Dry Matter Trial Plot MIS Forms

MIS Form	Type of Document	Responsible Person	Submits To
Dry Matter Trial Plot Information Form	Manual	FS	Manager (Weekly)
Dry Matter Trial Plot Block Progress Report	Manual	Manager	Coordinator (Weekly)
Dry Matter Trial Plot Progress Report	Spreadsheet	Coordinator	MD (Weekly)

Technical Assistance to Contract Farmers

Making Coaching More Effective

- Training for Field Officer, Field Supervisor, Field Worker will address the problems faced last year
 - Hire same Field Supervisors as last year (when possible) to ensure their knowledge is retained within the company
- ***During the weekly meeting, specific topics will be covered for the field staff to talk about during the next week's one-to-one meetings with farmers***
- Learning visit for Field Staff from different areas to share experiences

Formal Coaching Session

- Only one formal coaching session will be held
 - Pre-planting
- Will be supplemented through more targeted regular coaching
 - Agendas set in the weekly coordination meeting
- No field visit because training will take place prior to planting

Formal Coaching Team

- Field Officer & Field Supervisor
- Manager
- Expert of Company Seed Program
- Coordinator
 - Attended some sessions as a facilitator
- Uppazilla Agricultural Officer & Government Service Holder in regard to field
 - An additional resource person in the training who will facilitate some sessions
 - Will be given training materials and/or script by Company

TOT

- One TOTs
 - Three days
 - To provide more opportunities for practice trainings
- Facilitator
 - Hired facilitators from BADC, SCA
- Topics
 - Technical topics of the trainings
 - Adult learning methodologies
 - How to use training materials
 - Practice trainings
- Participants
 - Field Officer & Field Supervisor
 - Field Workers
 - Manager
 - Expert of Company Seed Program
 - Coordinator

Facilitating Access to Inputs

How Access Will be Facilitated

- Provide seed
 - Farmers purchase seed from authorized companies
- Provide cash for other inputs, but will not facilitate access to those inputs
 - Farmers buy inputs in the local market
 - May change because of new relationship with UPL
- There will be an evaluation after the 2011 season, there will be a review of input supply to determine if it will be possible to make arrangements with input supply companies
 - This will allow Company to build its experience in contract farming and build credibility before exploring tripartite arrangements

Seed Distribution

- Seed distribution
- Utilize own seed in Birgonj (425 acres)
 - Distributed the seed on credit
- Other 175 acres of land
 - Diamant variety will be purchased by Company – possibly from Square
 - Working with the farmers to gather their preferences before making the decision by 10 August
 - Bottoli, Upson, Shibgonj & Gobindaganj
 - Other farmers will purchase seed themselves
 - Company will provide credit at the rate of 25,000 BDT per acre
 - Decision making will be participatory
- Will try to motivate the farmers to coordinate their distribution times among the block
 - If necessary will distribute two to three times per block to avoid unnecessary losses from improper storage and late planting

Price of Seed

- 37 BDT per kg for Certified Seed
 - Determined by market price
 - Written into the contract
- 50 BDT per kg for Foundation Seed
 - Determined by market price
 - Written into the contract
- Seed distributors will not provide a discount for bulk purchases
 - Established through discussions with seed distributors

Other Input Distribution

- Recommend 'good' local input suppliers to farmers
 - Local input distributors
 - Provide credit
 - Good reputation for quality
 - Product availability
 - Close to blocks
 - Will discuss the possibility of a discount for farmers who show their farmer card
- Ensuring quality
 - Company can provide testing kits to randomly test input quality (to ensure purity of the chemicals), it will be helpful for Company Seed & contract farmers
 - Kits are expensive, so may not happen in 2009

Seed Program

Why Have a Seed Program?

- Ensure good quality seed
 - Stored under good conditions
 - Taking advantage of the Cold Storage
 - Disease free
 - Generation
 - Shape size
- Ensure the proper variety
 - Introducing new varieties of processing potato
- Lower costs than purchased seed
 - For distributing to contract farmers
- Developing new business opportunities through selling seeds
 - Bigger market in the long run
- Supply is near to contract farmers
 - Makes distribution easier and less costly
- Avoiding dependency on third-party seed suppliers

Responsibilities of Seed Program

- Seed Program Team
 - Develop foundation seed for contract farming
 - Develop certified seed for outside marketing
 - Responsible for all aspects of seed program (planting, quality, harvesting, etc.)
 - From breeder seed or basic seed and from tissue culture plantlet
- Contract Farming Team
 - Develop certified seed from foundation seed supplied by Seed Program Team
 - Responsible for overseeing contract farming of certified seed to be used by contract farmers next year

Sources of Seed

- Collecting breeder seed or basic seed from the Netherlands
 - AgriCo
 - HZPC
 - Denhartigh
 - Meijer
 - Brady's Hunter
 - Testing purposes
- Purchased plantlet from a tissue culture labs in Bangladesh
 - Rajshahi University
- Contract farming team will get foundation seed from Seed Program which was grown last year

Seed Program Activities

- Seed Program Team (mini-tuber from plantlet, foundation & certified,) cultivation by Company
 - Mini-tuber
 - Pre-Foundation seed
 - Foundation & certified seed
- Contract farming team will get foundation seed from Seed Program which was grown last year

Quality Control System

- Institute quality control systems to ensure high quality seed production at different stages of the process
 - Plantlet production area (net house)
 - Micro-tuber production area (net house)
 - Pre-Foundation seed production (open field)
 - Foundation seed production (open field)
 - Certified seed production (open field)
- Introduction of certification system by third party (government) Seed Certification Agency
 - Visit two times per months
- Post harvest verification system
- Preservation system
 - Develop a preservation system
 - Develop an inspection system

Proposed Production System Changes

- Spraying squad
 - Responsible for spraying fungicide & pesticide in the appropriate manner
- Rouging squad
 - Responsible for identifying diseased plants and uprooting them