Report Results 2009

BO-10-006-113 - Technological and Knowledge support for White Potato Production and Processing in Philippines

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Perspectives of producing potatoes for industrial processing in the Philippines

Contents

Introduction

The Philippines with a population of 98 million on 300,000 km^2 of which 19 % (57,000 km^2 = 5.7 million ha) arable land grow potato on 7,000 ha with and estimated production of about 120,000 t per annum. This means that on average a person eats about 1.2 kg potatoes produced in the country. The national production is all sold on the fresh market and no potatoes produced in the country are currently processed into chips (crisps), extruded products or into French fries. Those products, however, are available in retail and restaurants – notable French fries though e.g. Jollibee and McDonalds quick service restaurants – from imports. Chips are produced nationally (e.g. by URC) from imported fresh potatoes (17,000 t/year). French fries are imported frozen at a quantity of 32,000 t/year. Assuming that 2 tons of potatoes are needed to produce 1 t of French fries this represents a quantity of raw material equivalent to 64,000 t per annum. There also is a not quantified amount of fresh potato imported from China arriving at retail outlets in the Philippines conservatively estimated at 10 % of the volume i.e. 12,000 t per annum. Official statistics show that based on 'raw material' the Philippines import for about 125,000 fresh potato per year. This is twice as much as national production.

Goal of the project: the Philippine Department of Agriculture has asked the Office of the Netherlands Agricultural Councilor in Manila to provide Dutch potato expertise and possibly technology and techniques to add value to the present fresh market chain by exploring avenues of processing potatoes into products at competitive conditions to world markets. The technology is to meet the demands for fresh and processed products: modern cultivars, storage, processing and marketing technologies.

Past initiative in Mindanao

Commercial investors appear to be interested in agricultural development in Mindanao. A first plan to set up large scale potato production was formulated in 1997 by the Mindanao Potato Corporation

(MPC). MPC consisted of a number of Philippines agro business companies. A project proposal was compiled in collaboration with the Netherlands based company Jan Hak & Partners. This proposal failed to materialize due to funding bottlenecks caused by the financial crisis in Asia at that time.

Approach of the project

- Description of the existing potato production, handling, storage and marketing technology
- Description of the present status of the market and trends in production and demand
- Proposal of new approaches to enhance the potato chain particularly with respect to production, processing as to diminish the present dependence on imports of fresh and processed potatoes.
- Establishment of contacts between industrial partners from The Netherlands and The Philippines aimed at increased usage of Dutch technology and expertise in the potato chain both for locals markets and for regional markets
- Pinpointing areas of cooperation and investment for the entire Dutch agro knowledge and industry sector

Production conditions

Seasons and agronomy

Most potatoes (63 % of the acreage and 72 % of production in 2007) are grown in Benguet in the Cordillera Autonomous Region in the northern part of Luzon. Potatoes can be grown throughout the year, but are grown in relatively distinct seasons in Northern Luzon:

- wet season planting February-March, harvest June-July
- dry season planting September-October harvest – January February
- lowland planting winter crop planting October-November, harvest January February (irrigated)

Having crops in the field during the typhoon season (August-September) is risky.
Mindanao in the South has no typhoons and a more regular rain pattern allowing year round production.
All practices are carried out by hand and no part of production is mechanized. Table 1 summarizes the differences in crop characteristics of the Cordillera Autonomous Region (CAR) and Mindanao

Most interviewed parties (early March 2009) pointed towards Mindanao as offering best prospects for setting up a potato project. Mindanao appears to have better future potato prospects than CAR. Mindanao has a number of well equipped ports for shipping seed, ware and processed potatoes and equipment.

Table 1. Characteristics of CAR and Mindanao

Characteristic	**CAR**	**Mindanao**
Present acreage	Over 70 %	About 15 %
Field size	Relatively small	Comparatively larger
Geography	Very hilly	Relatively flatter
Accessibility	Moderate	Reportedly better
Mechanized farming	Difficult (hand held machines)	Doable (small tractors)
Investment interest	Limited prospects	Commercial interest
Soil borne pathogens	Infested with BW and PCN	Virgin land available
Crop rotation	Potatoes once per year	Wider to be introduced
Road infrastructure	Steep	Diverse quality

Seed potatoes

Seed from the wet-season crop is stored for the following wet-season crop. A similar practice exists for the dry-season crops. The seed is stored for 8-9 months. Farmers may keep their own seed potatoes or scout for better fields in the area and make a deal with the grower. Cold storage is not practiced despite the apparent advantage of better price setting, small holders apparently can not store their potatoes under refrigerated conditions.

There are introduction schemes of basic seed material. The Bureau of Plant Industry (part of the department of Agriculture, DA) in Baguio has a rapid multiplication laboratory from which they sell stem cuttings (1 Php each) to interested farmers who grow minitubers from them for own and neighboring farms. Part also goes to the (36 ha) BPI seed farm in Northern Luzon. At Mindanao, NOMIARC (also part of the DA) has rapid multiplication facilities from which they sell minitubers at 2.5 Php each. Some 11 special growers were trained to produce ‘certified’ seed but the added value was such that after a number of years the interest to be a ‘specialist seed grower’ disappeared. The facilities are adequate. Demand from farmers, however, is limited. That may be due to insufficient demonstration of improved seed’s superiority or the improvement over traditional seed is marginal. All fields visited showed remarkably low incidences of viruses.

Volumes of locally produced seed through a certification scheme are not available.

Most growers take (seed) potatoes from their table stock and store in diffused light conditions (DLS). DLS is a cheap and effective seed storage system; its major advantages being low investment cost and delayed physiological aging.

The most commonly grown table potato variety is Granola, others reportedly are Conchita, Cosima, Red Pontiac, Solibao (BSU PO3), Franze and Asterix. The most widely appreciated variety is Granola. Latest seed potato imports of Granola date back to 1983. The degeneration rate of Granola is very low. Igrotta is a variety bred by the Benguet State University, it has a high dry matter content rendering

it suitable for processing. The variety has been placed on the National list. Igaroto is a recently released variety developed by the potato breeding program of Benguet State University. The variety has a high dry matter content and is suitable for processing.

Diseases and pests

The Cordillera Autonomous Region (CAR) has the longest potato growing history in Philippines. Potatoes are grown in a narrow rotation. Many fields are infested with bacterial wilt (*Ralstonia solanacearum*) and with Globodera nematodes. Late blight (*Phytophthora infestans*) is the prevailing fungal disease. The main insect pest is thrips, farmers spray once or twice weekly fungicides against late blight and add insecticide when necessary.

Production costs

The costs of potato production are specified in appendix 1 and 2. The CIP-UPWARD provided data show the high cost of seed potato: 62 % of total production costs. The table below lists the production costs per ton of potatoes for Philippines, The Netherlands and USA.

Table 2 Potato production costs in Benguet and Mindanao regions

Potato production costs	Php	Euro	US $
Philippines			
Benguet (source: CIP-UPWARD)	16,194	234	341
Benguet (source: local farmer)	10,667	154	225
Mindanao (source: L. Pagane)	13,400	193	282
The Netherlands and USA			
The Netherlands	8,316	120	175
USA (Idaho)	6.930	100	140

The average cost of Dutch and USA produced potatoes is 57 % of Philippines produced potatoes. The production cost of potatoes in Philippines is high compared to The Netherlands and USA (Idaho).

A major question is whether the Philippino potato producer can be competitive with the international market. Processors will consider procuring Phillippino produced raw material on the following conditions:

- Competitive price setting
- Compliance to quality standards at producers' level
- Year round supply

Table 3.The cost of import of raw material for chips production in Manila is displayed in the table below.

Cost of imported raw material for chips production (c.i.f. Manila)				
(source: Liwayway)				
Year	Exporting country	Cost in Euro	Cost in US $	Import tax 40 %
2009	Germany	330		462
2008	USA		450	630
2009	USA		500	700
(source: URC)				
2009	USA		500	700

Quantitative Potato Data

Area and yield

In 2007, the Philippines produced some 111,000 MT of potatoes. The production was spread over four growing areas namely, Cordillera Autonomous Region (85%), Davao (8.3%), Northern Mindanao (5.7%) and Soksargen (0.48%). Yet in the same period, due to increasing demand (both for consumer and industrial application), the Philippines has imported about USD 26.3 million worth of potatoes or 46,887 MT (30% of total demand) mostly from Canada, USA and Australia, China, among others for the processing and service industries (viz. fries, chips, starch, etc).

Table 4 Potato production (MT) and acreage (hectare) in Philippines (Source: FAO, Rome)

Year	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
Area harvested (hectares)	5,242	5,173	5,328	5,336	5,394	5,446	5,497	5,451	5,600
Yield (MT per ha)	12.13	12.28	12.39	12.657	12.616	12.754	12.763	12.743	12.857
Production (MT)	63,584	63,524	66,016	67,540	68,050	69,456	70,160	69,461	72,000

The areas and production data vary much according to the source. The FAO (Table 4) estimates the area at less than 6,000 and production at 72,000 t. The Department of Agriculture (Table 5) shows statistics with a production of almost 120,000 t grown on almost 8,000 ha. A

survey by the Bureau of Plant Industry in Northern Luzon (table 6) shows figures about twice those of the DA in Table 5. The area in 1998 (believed to have grown considerably since then as much more land has been cleared of forest since) was 11,000 in Northern Luzon yielding almost 300,000 t with average yields well over 30 t/ha. It is important to arrive at the right statistics as it will be a guide towards future actions.

Table 5. Potato production (MT) and area (hectare) in Philippines. (Source: Department of Agriculture, Manila)

Volume

Region / Province	2003	2004	2005	2006	2007
Philippines	68,050	69,456	70,160	69,461	118,497
CAR	51,303	52,495	53,069	52,205	100,752
Cagayan Valley	296	304	284	448	528
Central Luzon	1	1	2	3	3
Bicol region	2	1	1	0	0
Central Visayas	60	57	52	62	58
Northern Mindanao	6,875	6,886	6,663	6,745	6,778
Davao region	8,944	9,053	9,477	9,436	9,811
Soccsksargen	568	659	612	562	566

Area

Philippines	5,394	5,446	5,497	5,451	7,939
Region / Province					
CAR	3,434	3,467	3,502	3,456	5,900
Cagayan Valley	76	77	75	75	78
Central Luzon	1	1	1	1	1
Bicol region	1	1	1	1	1
Central Visayas	23	21	19	19	22
Northern Mindanao	525	533	531	548	556
Davao region	1,267	1,267	1,293	1,280	1,310
Soccsksargen	67	79	75	71	71

Table 6. Data supplied by BPI in Baguio

MUNICIPALITY	AREA (000 HECTARE) CROP			QUANTITY (000) METRIC TON			YIELD (TON/HA)	
	DRY SEASON	WET SEASON	TOTAL	DRY SEASON	WET SEASON	TOTAL	DRY SEASON	WET SEASON
BENGUET								
ATOK	0.702	0.722	1.424	22.451	12.271	34.722	32.00	17.00
KABAYAN	0.123	0.027	0.150	4.069	1.298	5.367	33.08	48.07
KIBUNGAN	0.260	0.244	0.504	6.247	4.399	10.646	24.03	18.03
BUGUIAS	2.512	3.448	5.960	47.718	75.867	23.585	19.00	22.00
BAKUN	0.404	0.815	1.219	8.090	13.855	21.945	20.00	17.00
MANKAYAN	0.642	0.482	1.124	39.168	29.384	68.552	61.00	61.00
MT. PROVINCE								
BAUKO	0.415	0.168	0.583	23.234	7.578	30.812	56.00	45.00
TOTAL	5.058	5.906	10.964	150.977	144.652	295.629	35.015	32.586

SOURCE: GAYAO, B.T. and J.M. SIM, 1998. Potato Investment Profile in the Cordilleras

Imports of seed, ware and processed potatoes

The import of seed potatoes during 2000-2006 (Table 7) varied between 44 MT in 2006 and 1,131 MT in 2000 with a strong tendency to decrease over the seven year. The reasons so far are unknown by the project team.

Table 7 Import pattern of seed potatoes in the Philippines; 2000-2006.

	2000 Quantity	2001 Quantity	2002 Quantity	2003 Quantity	2004 Quantity	2005 Quantity	2006 Quantity
Seed Potatoes in kg	1,131,466	756,483	1,169,954	167,971	379,868	190,964	44,000

The import, however, of deep frozen French fries and raw material for potato chips production. shows a 34.3 % increase in imported potato commodities during 2002-2006.

Table 8 Increase in value (US $) of imported potato products into the Philippines; 2002-2006.

	2002	2003	2004	2005	2006
Increase in value (US $)	35,577,225	35,686,146	44,481,406	43,353,435	47,774,852
% of increase relative to 2002		0.3	25.0	21.9	34.3

The import of frozen potato products shows a steady increase: 14 % increase in volume during 2000-2006 (Table 2). The deep frozen potato products are French fries potatoes for final preparation in restaurants and fast food outlets.

Table 9 Import data of deep frozen potato products into the Philippines; 2000-2006.

2000	2001	2002	2003	2004	2005	2006	% change
Quantity (kg)							
27,848,292	30,057,380	29,856,336	29,316,262	34,446,480	30,694,673	31,757,137	14.0
C.I.F. Value (US $)							
16,309,833	17,086,029	15,620,128	15,115,097	18,901,463	17,325,801	19,011,991	16.6

The imported volume in 2006 (31,757 MT) is the equivalent of about 3,200 ha production area (assuming a 10 MT usable for processing yield level per hectare). This acreage is about half of the entire potato acreage in Philippines. About 17,000 MT are annually imported to feed the raw material requirement of the chips production factories. This is the equivalent of about 1,700 ha of field area. Total imports equal the production of about 4,900 ha; about 90 % of the total national potato acreage (2006).

Consumption

The bulk of the Philippines produced potatoes are consumed as table potato. The average consumption is calculated at 1.3 kg per capita. The majority of the currently grown varieties has a low dry matter content and are unsuitable for processing. The fast food chains Jollibee and McDonalds have quickly gained popularity, they imported 31,757 MT in 2006(equivalent to 65,000 MT potato raw material and are well established in many cities. Universal Robina Corporation (URC) and Liwayway are established potato chips manufacturers based in Manila. Considering local production and imports and calculated as fresh potato weight; annual consumption of potato in the Philippines is about 2.5 kg per person.

Table 1 shows the total quantity of potato imports (fresh and processed) **89,786** MT in 2006 a 26 % increase over 2002. If we assume a recovery rate of 50 % of French fries the 31,757 of French fries represent 63,514 tons of fresh potatoes (+ 31,757). The import of potatoes for chips production in Philippines amounted to 21,297 tonnes; a recovery rate of 25 % results in a local chips production of 5,324 tonnes of chips. The volume of imported chips is 994 tonnes. Total of chips in Philippines is calculated at 6,318 tonnes. Total amount of potatoes calculated as tones of raw material is 88,787 tonnes in 2006. If trends are still up (verify) in 2010 imports are likely close to 100,000 MT.

Processing
Experience shows that the prospects of setting up of a raw material production scheme for a Philippines based raw material supply for French fry industry is not to be considered a profitable enterprise. Import of deep frozen material is expected to be cheaper. Therefore imports from USA, Canada, Australia, New Zealand and some NW European countries are expected to continue due to lower costs.

The prospects of setting up a raw material production program for a chips production factory are likely to be more promising. Varieties, storage and processing technology is either available or can be imported. The challenge will be to select disease free production fields; disease free in the sense of absence of soil borne pathogens like bacterial wilt and potato cyst nematodes.

Processing industries
The full requirement of French fries for restaurants, fast food outlets is imported. USA based companies are the major suppliers.

Two Manila based companies; Universal Robina Corporation (URC) and Liwayway; process raw potatoes into chips. Their annually imported raw material amounts to about 17,000 MT. URC using 12,000 MT and Liwayway using about 5,000 MT. Liwayway imports 100 %. URC imports about 75 % and sources about 25 % locally. Both companies are interested in procuring locally but they need to have security on supply and quality. Philippine growers are yet to achieve such position.

Raw material supplying countries are: USA (supply October-May), Australia (January-July) and Germany (October-April). A well known chipping variety is Lady Rosetta. Atlantic, Diamant, Fina, Igorota (BSU PO4), Kennebec, Mantañosa and Raja are mentioned as locally grown chipping varieties.

A volume of 17,000 MT chipping potatoes will require about 1,700 hectares (assumed yield level of 10 MT); which is the equivalent of 6,800 ha in a 1:4 crop rotation system. Such arable land appears hard to be found in CAR. Prospects for obtaining such acreage are reportedly much better in Mindanao.

The country imports about 5,000 tonnes of potato starch per year. This volume equals the production of about 25,000 tonnes of raw material which is the equivalent of about 2,000 hectares of potato cultivation in the Philippines.

Seminar October 6, 2009
The 80 some delegates of the well attended seminar on Tuesday 6 October 2009 spanned the whole potato supply chain with farmers from Benguet, traders, wholesalers, representatives of the processing (Chips) industry, R&D and policymakers (assistant secretary of agriculture). The program is in appendix 5.

Some eye catching phrases during presentations and panel discussion:
- In the 60-ies of the last century the Philippines was a rice exporting country now we import food stuffs. Export in future should be possible again (Agr. sec).
- Mindanao is to become the food basket of the Philippines with a nautical highway from Davao (or Cagayan de Oro) to Metro Manila. Adequate delivery of potato should be part of that vision (Agr. sec).
- Nilo Bautista: late 90-ies we tried to set up a processing potato system at Mindanao for French fries processing: 30 t/ha yield and planting 300 h every month was the target. Fitting in relay crops in the rotation was part of assuring profitability. The Financial Asia Crisis made it impossible to pursue.
- The national statistics are not correct as at Northern Luzon we have two cropping seasons

(wet and dry) so area and production have to be doubled there (Jocelyn Perez).
- Leaf miner fly outbreak in 2000 and PCN (general) were well combated by research. The first by trapping, the second wit *Paecilomyces lilacinus* (Jocelyn Perez).
- Q&A:
  - The seed marketing chain is deficient, solving it should be part of the new activities.
  - Is northern Luzon already full, saturated with potato? Yes, but Mountain Province still has potential area. The real availability of land, however is at Mindanao.
  - Agr. sec: I want a plan by mid November and a full roadmap by mid 2010. This seminar is helping me a lot in setting priorities for each group of stakeholders (farmers, traders, …..).
  - Mayor of Atok at Benguet: we are happy with Igorota and Granola but need additional varieties. We also need an irrigation system to potato in the dry winter. The Emcee answered that it should be requested through local parliamentarians and Haverkort cautioned for yet increasing potato activities: PCN is there because of the intensive cropping (potato 1x or 2 x per year. In Europe only once every 3-6 years !).
  - We used to have red skinned varieties (Chief Fast Food Dealer Organization) for salad purposes. This can be re-introduced if need be.
  - Organic potato production is gaining momentum in Philippine potato R&D; both at Benguet State University (BSU) in Baguio and at University of Philippines (UP) in Los Banos.

Approach 2010

Based on:
- The two visits in March and September/October 2009 (reported above)
- The input and discussions during the seminar (reported above)
- Discussions among Adrie de Roo, Pit Laquian, Anton Haverkort and Romke Wustman

The following was decided regarding follow up and work plan 2010:
- We believe there is sufficient scope to continue the project into 2010
- We will focus on making chips processing potatoes grown domestically competing with imported raw material a viable option
- We will invite Dutch seed potato companies to introduce modern potato varieties for performance testing on fresh consumption and suitability for chip production
- Ideally at the end in 201x 2000 t of seed potatoes would be imported annually from The Netherlands, multiplied once at Mindanao and the result (30 t/ha) would yield 20 t of processing potatoes and 10 t of fresh market potato (dual purpose variety needed).
- Therefore in early 2010 a mission is needed to Mindanao to investigate which core group or key individual/company could fulfill the role of assuring:
  - seed import
  - contract multiplication with farmers
  - selling/contracts with the processing industry (URC/Liwayway)
- Further – during the same mission – the target area should be identified and its production and transport costs assessed ex ante.
- Business propositions will be formulated for the situation in 2020 and from there back-casting will allow the identification of the parties involved and there successive roles
- These parties likely will fit in a matrix 1) Supply Chain Shareholders (seed import, farmers (cooperation or association), traders, transporters nautical highway, processors, retail, consumers) and 2: Interested Stakeholders facilitating the process (Government, Business association, DA (Nomiarc), Netherlands seed suppliers, Netherlands hardware suppliers)
- Government support is necessary so the Asec agriculture idea of task force around this subject is needed
- Second half of 2010 a business plan finalization meeting by persons, institutions and businesses involved in the future venture will be held at Manila.

Appendix 1 Potato production costs (provided by mr. Luis Pagane, Davao)

Table xxx Potato production costs (Philippine Pesos) in Davao

LABOR		
Land Preparation		
Deep plowing and 2 passes of harrow	45 Man days	4,500
Planting	20 Man days	2,000
Basal Fertilization		
Hilling up and fertilizer	10 Man days	1,000
Side dressing		
Pesticides Spraying	5 Man days x 8	4,000
Weeding	10 Man days	1,000
Dehaulming	20 Man days	2,000
Harvesting	20 Man days x 2	4,000
Others – Hauling, sorting, cleaning, etc.		
Subtotal		**18,500**
MATERIALS		
Seed tubers @ Php 50/kg	2,500 kgs	125,000
(Sprouted ready to plant @ Php 70/kg)		(175,000)
Fertilizer (assorted) @ Php 1,000.00/bag	35 bags	35,000
Chemicals (assorted)		8,000
Knapsack Sprayer	2 units	4,000
Others		10,000
Subtotal		**182,000**
Over all total		**201,000**
Yield 15,000 kgs	Php 20.00 / kg	**300,000**

Appendix 2 Potato production cost (provided by CIP-UPWARD, Los Banos)

Commodity: Potato
Dry Season
Location: Atok, Benguet

Items	Man-days	Cost/unit	Total	Cost per Kg
Sales (Volume) 16,500 kg		**22.46**	**370,590**	
Labor:				
Land Preparation				
- inputed (days)	56	150	8,400	
- Cash (days)	86	150	12,900	
Planting /management				
- inputed (days)	68	150	10,200	
- Cash (days)	40	150	6,000	
Harvesting				
- inputed (days)	15	150	2,250	
- Cash (days)	31	150	4,650	
Hauling (inputs)				
- inputed (days)				
- Cash (days)			1,600	
Transport				
- Cash			1,620	
Sub-Total			**47,620**	
Inputs:				
Seeds (kg)	2,567	25	64,175	
Fertilizer				
Organic (bags)	235	85	19,975	
Inorganic(bags)	19	2067	39,273	
Foliar (liters)	12	165	1,980	
Fungicides (kgs)	38	612	23,256	
Pesticides (liters)	14	562	7,868	
Sub-Total			**156,527**	
Other Cost:				
Rentals			4,000	
Interest Expense				
Depreciation			1,900	
Miscellaneous (meals)			3,000	
Sub-Total			**8,900**	
Total Production Cost			**213,047**	
Marketing Cost				
Labor	35	150	5,250	
Brookers' Fee	20,780	1	20,780	
Transport Cost	20,780	1.35	28,053	
Communication			75	
Total Marketing Cost			**54,158**	
Total Expenses			**267,205**	16.19
Net Income			**103,385**	

Appendix 3 Retail prices potatoes and potato products (data collected September-October 2009)

Retail prices (September-October 2009) in various markets within Philippines.

Retail prices in Rustam supermarket Manila

Product	Package	Price/item (Pesos)	Quantity (gr)	Price/kg (Pesos)	Price/kilogram (Euro 1 = PhP 69.59752)	Price/kilogram (US $ 1 = PhP 47.69665)
deepfrozen French fries	plastic bag	52.00	450	116	1.66	2.42
deepfrozen French fries	plastic bag	75.50	450	168	2.41	3.52
deepfrozen French fries	plastic bag	109.00	2050	53	0.76	1.11
deepfrozen French fries	plastic bag	169.00	907	186	2.68	3.91
fresh potato Big	plastic bag	90.00	1000	90	1.29	1.89
fresh potato Jumbo	plastic bag	95.00	1000	95	1.36	1.99
fresh potato Marbles	plastic bag	45.00	1000	45	0.65	0.94
fresh potato Regular	plastic bag	80.00	1000	80	1.15	1.68
Lays chips	sealed bag	99.50	184	541	7.77	11.34
Lays pringles	can	63.00	120	525	7.54	11.01
mashed potato	carton box	137.50	377	365	5.24	7.65
Raffles chips	sealed bag	99.50	184	541	7.77	11.34

Trading post (whole sale) Baguio

Wholesale prices potatoes at Trading Post Baguio 2 October 2009

Product	Package	Price/item (Pesos)	Quantity (kg)	Price/kilogram (Pesos)	Price/kilogram (Euro 1 = PhP 69.59752)	Variety
fresh potatoes regular	plastic bag	640	16	40	0.57	Igrota
fresh potatoes Jumbo	plastic bag	720	16	45	0.65	Igrota
fresh potatoes marble	plastic bag	320	16	20	0.29	Igrota
fresh potatoes regular	plastic bag	300	15	20	0.29	Granola
fresh potatoes Jumbo	plastic bag	435	15	29	0.42	Granola

Appendix 4. Quantity and Value of Selected Agricultural Imports, 2000-2006 (Quantity in kg; CIF Values in US$)

	2002		2003		2004		2005		2006	
Commodity Description	Quantity	C.I.F. Value	Quantity	C.I.F. Value	Quantity	C.I.F. Value	Quantity	C.I.F. Value	Quantity	C.I.F. Value
-	-	-	-	-	-	-	-	-	-	-
Seed Potatoes (Not Sweet Potato)	**1,169,954**	**326,513**	**167,971**	**91,858**	**379,868**	**152,499**	**190,964**	**70,792**	**44,000**	**22,499**
Potatoes, Other Than Those Of Sub-Item '054.10-01, Fresh Or Chilled (Not Including Sweet Potato)	812,897	239,627	839,520	237,487	2,667,099	757,131	5,026,593	1,381,800	3,932,264	954,644
Potatoes, Other Than Those Of Sub-Item 054.10-01, Fresh Or Chilled (Not Including Sweet Potato)	1,118,186	267,738	5,343,459	1,208,868	4,831,118	1,198,811	5,552,061	1,461,198	3,809,502	1,076,546
Potatoes, Uncooked/Cooked By Steaming/ Boiling In Water, Frozen	2,518,343	1,131,700	2,785,199	958,203	2,291,339	794,575	2,275,983	962,882	4,845,243	2,336,870
Potatoes, Wtr/Not Cut/Sliced, Not Further Prepared	?									

Potatoes, Whether Or Not Cut Or Sliced, But Not Further Prepared	42,767	17,145	942	3,144	73,487	58,922			7,711	11,021
Potatoes, Prepared Or Preserved Otherwise Than By Vinegar Or Acetic Acid, Frozen	29,856,336	15,620,128	29,316,262	15,115,097	34,446,480	18,901,463	30,694,673	17,325,801	31,757,137	19,011,991
Potatoes, Prepared Or Preserved Otherwise Than By Vinegar Or Acetic Acid, Not Frozen	388,469	371,523	416,982	456,832	695,902	754,604	908,439	948,489	994,568	947,710
Total	**71,425,435**	**35,577,225**	**77,323,688**	**35,686,146**	**90,074,684**	**44,481,406**	**88,388,987**	**43,353,435**	**89,786,282**	**47,774,852**

Source: Statistics office, Government of Philippines, Manila

Appendix 5 Program of visit

Program of Messrs. R. Wustman and A. Haverkort Manila-CDO-Bukidnon-Davao-Baguio-Laguna Visit (26 September – 7 October 2009)
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(As of 22 Sept 09)

26 September, Saturday

14.10 H	ETD Amsterdam for Manila via KLM

27 September, Sunday

09.45 H	ETA Manila (NAIA)
	Transfer to Terminal 2 (Philippine Airlines)
	Check in
13.10	ETD Manila for Cagayan de Oro (CDO)
14.45	ETA CDO
	Avis Rent-a-Car Pick up at Airport to Mallberry Hotel
16.00	ETA Mallberry Hotel
	Free Time

28 September, Monday (Toyota Innova car with chauffer by AVIS)

07.00	Breakfast at Hotel
07.45	Check out
08.00	Leave Hotel
08.30	ETA Dept of Agriculture – Regional Office
	Briefing by Ms. Juanita Salvani, R & D chief
09.30	Leave for Malaybalay, Bukidnon
11.15	Meeting at Nomiarc
12.15	Lunch
	Check in Pine Hills Hotel
14.30	Discussion at Nomiarc
18.00	Back to Hotel
	Dinner at Hotel

29 September, Tuesday (Avis Rent-a-Car to be provided)

05.00	Field visit
06.30	Breakfast at Hotel
07.00	Check out
	Leave for Davao del Sur
12.00	ETA Davao City
	Briefing by DoA Coordinator
	Lunch
18.00	Check in Davao Airport (must be at airport at least 45 minutes before departure time)
18.55	ETD Davao for Manila
20.45	ETA Manila Terminal 2
	Airport Yellow Taxi (metered)
21.45	ETA Hotel Celeste (Pasay Road, Makati City)

30 September, Wednesday

12.00	Meet and pick up at Hotel Celeste lobby (Pit to accompany to meeting)
12.30	Meeting with Mr. Sammy Dalisay, point person for French Fries of Jollibee Corporation (biggest User of FF and main competitor of McDonald's in the Philippines)
14.00	Meeting with Peter Teope

1 October, Thursday

10.15	Leave Hotel for Victory Liner Bus Terminal (Pasay City)
11.15	ETD Manila for Baguio via Luxury Coach (28 seater with toilet)
16.15	ETA Baguio Taxi to The Manor Hotel, Camp John Hay, Baguio City
19.00	Dinner-Briefing with Mr. Jun Duldulao (potato resource person) and other key people from BSU, Farmers organization and staff of Mr. Efren Chatto) [Dinner for your account]

2 October, Friday (Avis Rent a Car to be provided)

07.30	Breakfast (not included in hotel rate; charged separately) Check out
08.30	Leave for field inspection (potato growing areas) Visit Baguio Public Vegetable Market (retail and wholesale)
	Dinner in Baguio and overnight stay at hotel

3 October, Saturday

	Victory Liner Luxury Coach at 11.45 pm (5 hours) from Baguio to Manila Check in Hotel Celeste

4 October, Sunday Rest Day

5 October, Monday

Report Writing and Powerpoint Presentation Finalization;

	Visit of Venue (optional, to be arranged by Pit)
18.30 H	Fetch at Hotel Celeste (Adrie + wife, Romke + Anton) by Embassy car
19.00	Dinner Meeting with Adrie de Roo, Emcee of Seminar Program, other resource persons (total of 8 pax) at La Tienda Restaurant, Polaris St., Makati City
21.30	Back to Hotel

6 October, Tuesday

08.00 - 08.55	Registration
09.00	Opening Ceremony (Venue: Asian Institute of Management Conference Center, Makati City) by Emcee: Mr. Romy David
09.10	Philippine National Anthem
09.15	Background of Seminar (by Adrie de Roo, Agricultural Counsellor)
09.25	Welcome Remarks (by Robert Brinks, Netherlands Ambassador)
09.35	Introduction of Guest Speaker
	Speech of Guest of Honor (Mr. Salvador Salacup, Assistant Secretary and Export “czar”)
	Handing out of token of appreciation to Assistant Secretary by NL ambassador, Adrie, Anton and Romke.

10.00	Coffee or tea break with light snack
10.15	State of Philippine Potato Industry 1. Government Policy and Initiatives (Director Joel Rudinas) 2. Private Sector View (Mr. Nilo Bautista) 3. Growers' Experience (to be confirmed)
11.00	Presentation of Findings (Romke Wustman and Anton Haverkort)
12.00	Q & A: Moderator / Panel of Experts / Resource Persons
	Conclusion
12.30 H	Networking Lunch Distribution of potato wares
15.00	Adjournment
	Return items to Embassy
19.00	Dinner and progress discussion with Adrie, Pit, Anton & Romke

7 October, Wednesday

08.00	Leave for NAIA Terminal
10.45	ETD Manila for Amsterdam via KLM

Notes:

1. Hotel Bookings:
   1.1 Manila [Hotel Celeste]: 2 single deluxe rooms at PHP 4,880 net per room, per night incl. breakfast. Status: ok

   1.2 Cagayan de Oro [Mallberry Hotel]: 2 single superior rooms at PHP 2,200 net per room per night incl. breakfast. Booking reservation for 27 September, Sunday. Confirmation number 53829.

   1.3 Malaybalay, Bukidnon [Pine Hills Hotel]: 2 single superior rooms at PHP 1,200 Net per room per night incl breakfast. Booking reservation for 28 September, Monday. Confirmed allocation of Rooms 202 and 204.

   1.4 Baguio City [The Manor, Camp John Hay]: 2 single superior rooms at PHP 5,200 net per room per night without breakfast. Breakfast at PHP 550 net per person is separate at Le Chez Restaurant. Booking confirmation: ok per credit card guarantee sent.

2. Transportation / Logistics
   2.1 Mindanao (CDO/Bukidnon/Davao) by Avis Rent-a-car. Status: ok. Settlement of bill in cash at site. Please refer quotation on this as agreed upon.

   2.2 Baguio City: Land travel by luxury coach (28 seater with toilet onboard), One-way is PHP 700.00. Travel time is 5 hours from Manila. Two trips daily at 11.15 H and 23.45 H, to or from Manila. Ordinary aircon buses leave Baguio City every hour from terminal. Cost is PHP 460.00 one way to Manila.

3. Dinner Meetings
   These will be for your account unless offered.

Appendix 6 Program of seminar on 6 October 2009 in Manila

P R O G R A M

08.00 - 08.55 H	Registration
09.00	Opening Ceremony
09.10	Philippine National Anthem
09.15	Background of Seminar by Agricultural Counsellor (Ir. Adrie de Roo)
09.25	Welcome Remarks by Netherlands Ambassador (H.E. Robert Brinks)
09.35	Introduction of Guest Speaker
09.40	Speech of Guest of Honor (DA Assistant Secretary Salvador "Doy" Salacup)
10.00	Coffee or Tea Break
10.15	State of Philippine Potato Industry
	1. Government Sector View: Government Initiatives for Growth and Development of the Potato Industry by Director Joel Rudinas, Bureau of Plant Industry
	2. Private Sector View: Exploring the Potential of the Potato Industry in Mindanao in the Late 90s by Mr. Nilo Bautista, former General Manager of the Mindanao Potato Corporation
	3. R & D and Capacity Building Initiatives by Dr. Jocelyn Perez, National Team Leader of White Potato Sub-Network, International Potato Center (CIP)
11.00	Presentation of Findings of Dutch Consultants (Ir. Romke Wustman and Drs. Anton Haverkort)
12.00	Q & A
12.30	Conclusion Distribution of Dutch potato wares + brochures + souvenir items
12.40	Networking Lunch at Carte Blanche Restaurant (5th Floor, AIM Conference Center)
14.30	Adjournment

Mr. Romeo G. David
Master of Ceremony

Appendix 7 Selected pictures

Deepfrozen French fries (Cash & Carry supermarket, Manila; March 2009)

Packed ware potatoes (Cash & Carry supermarket, Manila; March 2009)

Potato chips (supermarket Cagayan de Oro; September 2009)

Wholesale market (Cagayan de Oro; September 2009)

Potato field in the hills close to Malaybalay (September 2009)

Potato field on Luzon island, north of Baguio city (September 2009)

Rapid multiplication laboratory in Malaybalay (September 2009)

Rapid multiplication at Baguio city (October 2009)

Ware potato wholesale market at Baguio City; ready for shipent to Manila (October 2009)