Industry Roadmaps and the AEC Gameplan: Processed Foods Industry (Processed Vegetables)

BOI-Resource-based Industries Service
28 May 2015
Baguio Country Club
DTI Industry Development Program

- **PDP2011-2016**: calls for the formulation of a comprehensive national industrial strategy that spell out opportunities, coordinate and promote the growth of forward and backward linkages in priority areas and high-potential growth sectors, and prepare other industries to attract investments and generate jobs.

- **January 2012**: the Board of Investments (BOI) formally launched the Industry Roadmapping Program (IRP), culminating in a comprehensive national industrial strategy.
  - Roadmaps being Implemented (25)
  - Roadmaps for Implementation (2)
  - Roadmaps being Crafted (26)
Roadmap Formulation & Implementation

DTI - Convenor, coordinator, facilitator and enabler

Private sector - The process of developing industry roadmaps is expected to be private sector-led (i.e. private sector takes the lead in both crafting and driving the action).

Other Gov’t Agencies – SWGs, Collaboration
Processed Food Industry Roadmaps Being Formulated

- DTI also active in coordinating with international partners to assist in formulating industry roadmaps.

<table>
<thead>
<tr>
<th>USAID-COMPLETE</th>
<th>EU-TRTA</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Processed Shrimp</td>
<td>▪ Processed Meat</td>
</tr>
<tr>
<td>▪ Carrageenan</td>
<td>▪ Processed Fish</td>
</tr>
<tr>
<td>▪ Dried Mango</td>
<td>▪ Products</td>
</tr>
<tr>
<td>▪ Cacao Tablea</td>
<td></td>
</tr>
<tr>
<td>▪ Condiments, Sauces</td>
<td></td>
</tr>
</tbody>
</table>
Philippine Processed Foods Industry

Economic Contributions

40% of the Total Manufacturing GVA in 2014 was comprised by Food Manufactures and Beverage Industries’ GVA

In 2012, almost half of total manufacturing establishments in the Philippines are in processed foods/beverage production.

- 23% of Total Manufacturing Employment or >270,000 people are employed by the industry in 2012
Philippine Processed Foods Industry

Relative Size

- Global Foods/Beverage Industry
  - According to IMAP’s Global Food and Beverage Industry Global Report, the global Food and Beverage Industry was estimated at US$ 7 Trillion in 2014.

- Philippine Processed Foods/Beverage Industry
  - In 2012, output of the processed foods and beverage sector’s output was valued at P 489 Billion (≈US$ 11 Billion).
  - About 99.6% of food manufactures are considered as MSMEs (DOST-PCIEERD)
Philippine Processed Foods Industry

Characteristic - Dynamic

The Processed Foods/Beverages industry’s output value increased by as much as 56% between 2010 and 2012.

Processed foods and beverages exports grew at an average rate of 12%/year in 2006-2014.
Philippine Processed Foods Industry

Performance

Composition of Philippine Food Exports

- Fresh Foods: 27%
- Marine/Aquaculture (Fresh): 25%
- Processed Foods: 46%
- Alcohol Beverages: 1%
- Non-Alcoholic Beverages: 1%

Major Processed Foods Exports

- Fruits & Extracts Total: 38%
- Coconut Total: 17%
- Dairy Total: 11%
- Sugar/Sweeteners Total: 13%
- Others: 21%

Majority of processed food exports of the country are in the form of “fruit and extracts”

Processed Foods – 46% of Total Food Exports
Investment Opportunities: Vegetable Processing in CAR
Regional Profile

- **Vegetable Bowl of the Philippines and Watershed Cradle of North Luzon**
- Population (as of 2010): 1.62 Million
- Total Land Area: 1.96 Million hectares
  - 177,839 hectares (agro-forestry land)
- Climate: Type II and III Climate
- Topography: Generally rugged terrain and steep mountain ranges.
- Slope: More than one-half of the region has slope of 50% and above which limits the area for intensive agriculture and settlement, but the other areas can be developed as agro-forestry.
- Soil: Clay loam
- Average Temperature: 23.9°C
- Rivers: Chico River (Kalinga), Apayao River, Libtecc Underground River (Abra).
Regional Profile

- CAR comprised the 3rd biggest per capita regional GDP in 2013, following NCR and CALABARZON

- CAR posted a 6% growth in its regional GDP in 2012-2013 period, not significantly far from the national average growth in GDP of 7.18%

- Employment: 348,000 persons out of 735,000 persons are employed in the agriculture sector (47%).

<table>
<thead>
<tr>
<th>Commodity</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Palay</td>
<td>3,432</td>
<td>3,676</td>
<td>3,886</td>
<td>3,944</td>
</tr>
<tr>
<td>2. Hog</td>
<td>2,170</td>
<td>2,018</td>
<td>1,912</td>
<td>1,847</td>
</tr>
<tr>
<td>3. Corn</td>
<td>1,271</td>
<td>1,615</td>
<td>1,662</td>
<td>1,787</td>
</tr>
<tr>
<td>4. Cabbage</td>
<td>785</td>
<td>759</td>
<td>762</td>
<td>767</td>
</tr>
<tr>
<td>5. Chicken</td>
<td>460</td>
<td>457</td>
<td>431</td>
<td>437</td>
</tr>
<tr>
<td>6. Cattle</td>
<td>296</td>
<td>291</td>
<td>278</td>
<td>278</td>
</tr>
<tr>
<td>7. Coffee</td>
<td>247</td>
<td>248</td>
<td>250</td>
<td>240</td>
</tr>
<tr>
<td>8. Chicken Eggs</td>
<td>191</td>
<td>188</td>
<td>191</td>
<td>213</td>
</tr>
<tr>
<td>9. Tilapia</td>
<td>178</td>
<td>183</td>
<td>187</td>
<td>191</td>
</tr>
<tr>
<td>10. Banana</td>
<td>138</td>
<td>134</td>
<td>135</td>
<td>146</td>
</tr>
</tbody>
</table>

Source of basic data: PSA-BAS
### Philippine Processed Vegetables Industry

(1) Industry Definition

<table>
<thead>
<tr>
<th>Section 3(c) of the Agricultural and Fisheries Mechanization Law of 2012 (RA 10601)</th>
<th>Agro-industrial processing refers to the local activity or series of activities to maintain or raise the quality or change the form or characteristics of agricultural, fisheries and forestry products. It also includes, but not limited to, cleaning, sorting, grading, mixing, milling, canning, dressing, slaughtering, freezing, pasteurizing, conditioning, packaging, repacking and transporting of said products.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 3 of RA 8976 (Food Fortification Act of 2000)</td>
<td>Processed foods or food products - food that has been subjected to some degree of processing like milling, drying, concentration, canning, or addition of some ingredients which changes partially or completely the physico-chemical and/or sensory characteristics of the food's raw material.</td>
</tr>
</tbody>
</table>
## Philippine Processed Vegetables Industry

### (2) Industry Coverage

<table>
<thead>
<tr>
<th>International</th>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canned, bottled, preserved, frozen, dried (except sun-dried) or otherwise</td>
<td>▪ Glazed/Crystallized – e.g., unshleled beans, olives, etc.</td>
</tr>
<tr>
<td>processed or preserved food products for human consumption.</td>
<td>▪ Dried – e.g., onions, maize, asparagus, cabbage, cauliflower, garlic,</td>
</tr>
<tr>
<td></td>
<td>white beans, etc.</td>
</tr>
<tr>
<td>Additives: salt, sugar, preservatives and other ingredients</td>
<td>▪ Fresh/Chilled/Frozen - e.g., peas, beans, sweet corn, spinach,</td>
</tr>
<tr>
<td></td>
<td>sweet corn, green peas, chick peas, <strong>mixed vegetables</strong></td>
</tr>
<tr>
<td>Excludes: wine or vegetable cooking oils</td>
<td>▪ Prepared/Preserved - peas, beans, asparagus, sweet corn, soybeans,</td>
</tr>
<tr>
<td></td>
<td>etc.</td>
</tr>
<tr>
<td></td>
<td>▪ Prepared/Preserved (Provisionally) – corn, chilies, onions,</td>
</tr>
<tr>
<td></td>
<td>cucumbers, tomatoes (paste, powder, puree), etc.</td>
</tr>
<tr>
<td></td>
<td>(60 product lines)</td>
</tr>
<tr>
<td></td>
<td>(DTI-Export Marketing Bureau)</td>
</tr>
</tbody>
</table>

*(IBISWorld)*
http://www.delmonte.com/vegetables/mixed/
Philippine Processed Vegetables Industry

(3) Economic Contribution

195 of the 12,000+ manufacturing establishments in the Philippines are into (fruit and) vegetable processing (2012).

30,670 people are employed in the industry (2012)

Gross Value Added = PhP 18.95 Billion (2012)
Philippine Processed Vegetables Industry

(4) Industry Players

<table>
<thead>
<tr>
<th>Global</th>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size (Revenue): US$271.3 Billion</td>
<td>▪ Del Monte (manufacturer)</td>
</tr>
<tr>
<td>Major players:</td>
<td>▪ Many local distributors</td>
</tr>
<tr>
<td>• North America and Europe</td>
<td>- Delfi Marketing</td>
</tr>
<tr>
<td>• China currently produces about half of</td>
<td>- Supercarry Trading Corp.</td>
</tr>
<tr>
<td>the world's vegetables and one-third of</td>
<td>- ADP Industries Corp.</td>
</tr>
<tr>
<td>the world's fruit (by tonnage), the majoritiy of this output is</td>
<td>- Terry Selection Inc.</td>
</tr>
<tr>
<td>unprocessed.</td>
<td>- Mrs. Mary’s Natural Vegetables</td>
</tr>
<tr>
<td>(2013 exports = US$ 3.84 Billion)</td>
<td></td>
</tr>
<tr>
<td>• ASEAN: Thailand as the biggest vegetable exporter</td>
<td></td>
</tr>
</tbody>
</table>
## Philippine Processed Vegetables Industry

### Veggie noodle producers – CAR

<table>
<thead>
<tr>
<th>Province</th>
<th>Producers</th>
</tr>
</thead>
</table>
| Abra       | 1. Talledo’s Miki Commercial  
3. 3A Claustro Food Products  
4. Mile’s Panciteria  
5. T.P. Rapisura Panciteria  
6. Terry’s Homemade Veggie Noodles  
7. Jaydine’s Panciteria  
8. ADTEMPCO *  
9. Organisasyon ng Kababaihan ng Bucay* |
| Mt. Province|  
MRDC  
Bayyo Mommie's Organization  
Lukkat Irrigator's Association  
Kebasu Farmers Organization |
| Ifugao     |  
Agnes Food Enterprise  
Cora's Food Products  
Dulnuan Enterprise  
Hojap Vegie |
### Philippine Processed Vegetables Industry

#### Veggie noodle producers – CAR

| Benguet          | Apugan Sto. Tomas Women's Orgn.  
|                  | Monay Veggie Noodles                  
|                  | St. Pio Migrants Apostolate          
|                  | Mom Ace Enriched Veggie Noodles & Chips  
|                  | Momay's Enriched Veggie Noodles and Chips  
|                  | Hiland Harvest                        
|                  | Majesty Hands Enterprises             
|                  | Bonglo-Rural Improvement Club         
|                  | RIC- Buguias                           
|                  | Dialy and Kidz Food Products          
|                  | Bonglo Rural Improvement Club         
|                  | Majesty Hands Enterprises             
|                  | Harvest Vegetables Enriched Noodles   
|                  | Hiland Harvest                        
|                  | Buguias Harvest                       

**INVEST Philippines**

**Your Business. Our People.**
Philippine Processed Vegetables Industry

(5) Industry Performance

- Production Value = No actual data publicly available
- Export

2013 Exports = US$ 6.19 Million

>30% in the form of mixed vegetables (frozen)

Major Export Markets:

2013 Exports = US$ 6.19 Million

Ave. Annual Export Growth (2006-2013) = 14%
Philippine Processed Vegetables Industry

(5) Industry Performance

- **Net Trade**

- Philippines is a major net importer of processed vegetables.
- Major imports are in the form of tomato paste and processed leguminous vegetables.
- Imports growing more rapidly each year (growth rate of 15% annually compared to 14% of exports growth).
# Philippine Processed Vegetables Industry

<table>
<thead>
<tr>
<th>Country-Exporter</th>
<th>Export Form/s (Variety)</th>
<th>Percent of Processed/Total Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philippines</td>
<td>Dried vegetables, frozen vegetables, provisionally-preserved vegetables</td>
<td>16%</td>
</tr>
<tr>
<td>Thailand</td>
<td>Dried, whole/ cut/ sliced/ powdered vegetables, steamed/frozen tubers, preserved/frozen tubers, preserved vegetables (brined, sulphur-based solution), frozen vegetables, provisionally-reserved vegetables</td>
<td>30-40%</td>
</tr>
<tr>
<td>China</td>
<td>≈Thailand</td>
<td>&lt;10%</td>
</tr>
<tr>
<td>USA</td>
<td>≈Thailand</td>
<td>34%</td>
</tr>
</tbody>
</table>
Proposal for Investors:

- Establishment of a Vegetable Processing Plant in CAR, including necessary support facilities/infrastructure.
- Specific Product – Veggie Noodles, Frozen Mixed Vegetables
- Market: Local/Export

Major components: semi-temperate vegetables

- Corn
- Peas
- Beans
- Carrots
- Potato
Bases for Promoting Vegetable Processing - CAR

Sustain Economic Growth
↓
- High-value crops and agro-forestry production
- Local natural resource-based manufacturing and other high-value, low volume technology-based manufacturing

2012-2013 PRIORITY INDUSTRY CLUSTERS FOR NATIONAL CONVERGENCE
→ Processed Food (CAR)
2015 National Priority Industry Clusters
→ Fruits and Nuts (Northern Mindanao)
Opportunities for CAR

(1) Vegetable Production Powerhouse – Raw Material for Vegetable Processing

• Superior quality vegetables produced in CAR
• CAR climate suitable for semi-temperate vegetables

≈80% of the Philippines’ total semi-temperate vegetables are produced in CAR
Opportunities for CAR

(2) Support Facilities/Infrastructure

- Network of roads/highways
- FMRs (50 DA Projects)
- Irrigation (31 DA Projects)
- Market/Trading Centers
  - Benguet Agri-Pinoy Trading Center
- Loakan Airport (Baguio City)
- Various SCUs
- Commercial/Rural Banks
- Utilities
- Food Terminals – 25 DA Projects
- Post-harvest Facilities – 18 DA Projects
- Agricultural Tramline
  - Bila Agricultural Tramline (Mt. Province)
  - Bonglo Agricultural Tramline (Benguet)

http://car.da.gov.ph/index.php/project-maps#!/catid=1
Opportunities for CAR

(3) Technologies

- RM: Vegetable Production Guides—DA-BAR, DOST-PCAARRD, UN-FAO
- Processing technologies – available

Immersion in circulating cooled solution

Blanching

Metal Detection, Cooling

Blast, Cryogenic Freezing

Packaging technologies – Bottling, canning, plastics (PET tray in overwrap film, zip lock bags), vacuum packaging technology

Industry Life Cycle Stage:
- Technological change is relatively minimal and focused on improving processing efficiency (IBISWorld)
Opportunities for CAR

(4) Regulatory Structure

• Product Quality – [RA 9711] FDA Circular 2013-10 (Revised Guidelines for the Assessment of Microbiological Quality of Processed Foods) [Table 5. – Fruits, Vegetables, Nuts and Seeds]
• Product Standards – No mandatory PS for processed vegetables
• Exports – GAP, GMP, HACCP
Opportunities for CAR

(5) Market Opportunities

- Demand drivers (experience of China, Thailand)
  - Increasing per capita income -> urbanization -> “fast-phased” lifestyle
  - Huge processed vegetable components on “meal solutions”
  - Trend: Healthy processed foods (food safety) mimicking the taste of natural foods; Organic vegetables

- CAR with relatively high per capita GDP; growing population.
- Almost 90% of the processed foods/beverages produced in the Philippines are consumed locally, the remaining portion is exported.
- Institutional markets, proliferation of mobile food carts
- Export Opportunity: Industry revenue is expected to expand at an annualized rate of 3.0% over the five years to 2020, reaching $315.2 billion
# Opportunities for CAR

## (6) Support Programs

| DTI-BOI                  | • Industry Development - DTI Roadmapping Program  
<table>
<thead>
<tr>
<th></th>
<th>• Investment Promotion - Incentives vis-a-vis 2014 IPP’s listing on “Agribusiness/Fishery”</th>
</tr>
</thead>
</table>
| DTI-ROG                 | • Clustering (Regional TWGs) 
|                         | • Shared Service Facility (SSF) 
|                         | • SME Roving Academy                                                                       |
| DTI-EMB, DTI-CITEM      | • Matching Missions 
|                         | • Annual Trade Fairs (IFEX)                                                                  |
| DOST                    | Small Enterprise Technology Upgrading Program (SETUP)                                      |
| DA                      | - DA Infra Projects in CAR (already discussed)                                             |
| BSP                     | Small Business Guarantee and Finance Corporation (SBGFC) to address SME financing needs    |
Opportunities for CAR

(7) Behavioral Changes - Farmers

• Growing unity among stakeholders (e.g., Benguet Vegetable Farmers Federation)

• Greater familiarity among stakeholders on organic farming and Integrated Pest Management
Industry Challenges

(1) Raw Material

CAR Vegetable Production System:
- For home consumption
- Vegetables grown as a secondary crop
- **CAR: Specialized**

Expansion of areas
Priority Crops
High-yielding varieties
Industry Challenges

(1) Raw Material

- Small landholdings per farmer
- Seasonality
- Pest/Disease

Improvement of Farming Systems
- Integrated Pest Management
- Soil amelioration and water management
- HYVs
- Organic Farming
- Crop Production Programming
- Clustering

Drought, Frost

Climate Change Mitigation and Adaptation

Logistics

Efficient and low-cost logistics

Financing

Available and accessible capital
Industry Challenges

(2) Processing

- Limited data on the production and profile of stakeholders/processors
- Strengthen producer-processor linkage
- Organization of processors

- Completion of the DA’s Vegetable Roadmap/s
- Formulation of Processed Vegetable Roadmap
Industry Challenges

(3) Support Facilities/Infrastructure and Marketing

- Rehabilitate and modernize existing “Bagsakan” and Trading Centers
- Establish more “Bagsakan”/Trading Centers
- Well-managed “end-to-end” cold chain system to reduce losses upon transport to/from processing plants
Industry Challenges

(4) Regulation

• Development of food product standards, safety and quality assurance and compliance vis-à-vis global standards
Case Study - Thailand

- 30-40% of total production for export
- Thailand has >30 companies manufacturing or distributing frozen fruits and vegetables.
- RM: Technological improvement (mechanization), modernization of farming practices
  - Transition arrangements for those affected by mechanization
- Integrated: food catering -> air and shipping services and hospitality industries
- Niche market
  - Japan, USA, EU: frozen French bean, sweet corn, and okra; canned vegetables
  - Customer-responsive products (quality). E.g., Organic, chemical-free, and EUREP GAP-compliant
- Lessons Learned:
  - Lesson 1: Understand and capitalize on market opportunities, and adjust systems to meet changes in customer requirements.
  - Lesson 2: Focus government support to encourage foreign investment, concentrate on quality, and promote cooperative and niche marketing
  - Lesson 3: Promote the processing sector through streamlined production and market development, and focus on production advantages and customer requirements
  - Lesson 4: Provide frameworks and support for identification and development of niche markets and foster private/public sector working relationships

Case Study - China

- 1980: Vegetable Basket Program
- 1995-2001: Crop Diversification
- Recent: Focus on quality and safety

<table>
<thead>
<tr>
<th></th>
<th>1980</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>3.2 million has.</td>
<td>80.6 million tons of veggies</td>
</tr>
<tr>
<td>Area</td>
<td>18 million has.</td>
<td>583 million tons</td>
</tr>
</tbody>
</table>

- Recent development: “Coordinated Supply Chain”
  - <0.5 has/farmer → consolidation of produce per farm by traders
- Innovation: “Green genetics”
- Supply Chain:
  - 90% of total production for local wet markets
- Market:
  - Economic transition → increased processed vegetable consumption
  - Emerging market (local): proliferating supermarkets, hypermarkets, convenience stores
  - Exports - <10% (tomato paste, canned mushroom, dehydrated and frozen vegetables)

Export Market:
- Dried – EU, USA, Japan, Korea
- Frozen vegetables – EU, USA, Japan, Korea, A-NZ
- Canned Vegetables – EU, USA, Japan, Korea

Processed Vegetables Industry & AEC

Seven priority areas for food, agriculture and forestry:

1. **Strengthening food security**
2. Facilitating trade in agriculture and forestry products
3. Generating and transferring technology to increase productivity and develop agri-business
4. Developing rural communities and human resources
5. Involving and investing in the private sector
6. Managing and conserving natural resources for sustainable development
7. Strengthening ASEAN cooperation in addressing regional and international issues.
Processed Vegetables Industry & AEC

Illustration: PH exporting frozen mixed vegetables to China

<table>
<thead>
<tr>
<th>Starting Date</th>
<th>Year</th>
<th>ACFTA TARIFF RATE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 Jan</td>
<td>2012</td>
<td>0</td>
</tr>
<tr>
<td>01 Jan</td>
<td>2013</td>
<td>0</td>
</tr>
<tr>
<td>01 Jan</td>
<td>2014</td>
<td>0</td>
</tr>
<tr>
<td>01 Jan</td>
<td>2015</td>
<td>0</td>
</tr>
<tr>
<td>01 Jan</td>
<td>2016</td>
<td>0</td>
</tr>
<tr>
<td>01 Jan</td>
<td>2017</td>
<td>0</td>
</tr>
<tr>
<td>01 Jan</td>
<td>2018</td>
<td>0</td>
</tr>
</tbody>
</table>

Illustration: PH exporting frozen mixed vegetables to Singapore

<table>
<thead>
<tr>
<th>Starting Date</th>
<th>Year</th>
<th>ATIGA TARIFF RATE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 Jan</td>
<td>2012</td>
<td>0</td>
</tr>
<tr>
<td>01 Jan</td>
<td>2013</td>
<td>0</td>
</tr>
<tr>
<td>01 Jan</td>
<td>2014</td>
<td>0</td>
</tr>
<tr>
<td>01 Jan</td>
<td>2015</td>
<td>0</td>
</tr>
</tbody>
</table>

AMS Enjoying Concession: All.
Processed Vegetables Industry & AEC

Illustration: PH imports chilled asparagus from China

<table>
<thead>
<tr>
<th>Starting Date</th>
<th>Year</th>
<th>ATIGA TARIFF RATE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 Jan</td>
<td>2012</td>
<td>0</td>
</tr>
<tr>
<td>01 Jan</td>
<td>2013</td>
<td>0</td>
</tr>
<tr>
<td>01 Jan</td>
<td>2014</td>
<td>0</td>
</tr>
<tr>
<td>01 Jan</td>
<td>2015</td>
<td>0</td>
</tr>
</tbody>
</table>

AMS Enjoying Concession: All.

Illustration: PH imports mushroom from China

<table>
<thead>
<tr>
<th>Starting Date</th>
<th>Year</th>
<th>ATIGA TARIFF RATE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 Jan</td>
<td>2012</td>
<td>0</td>
</tr>
<tr>
<td>01 Jan</td>
<td>2013</td>
<td>0</td>
</tr>
<tr>
<td>01 Jan</td>
<td>2014</td>
<td>0</td>
</tr>
<tr>
<td>01 Jan</td>
<td>2015</td>
<td>0</td>
</tr>
</tbody>
</table>

AMS Enjoying Concession: All.

INVEST Philippines
Your Business. Our People.
Conclusion, Recommendations

- CAR is an ideal location for the establishment of Vegetable Processing Facility.
- CAR can exploit the opportunities posed by AEC
- Competitiveness of the RM segment (production of fresh vegetables) is crucial; calls for the immediate completion and implementation of DA’s Vegetable/s Roadmaps is crucial
- Recommend for the formulation of Processed Vegetables Industry Roadmap
THANK YOU!!!

Director Nestor P. Arcansalin
T/ (+63 2) 895 – 3977
E-mail/ NPArcansalin@boi.gov