



Bringing Agroecology to conventional markets: the approach of the Agro-Processing Development (APD) Co. Ltd.

*Lao Upland Conference,
Session 3.1. Bringing agroecology to the market: Innovative market
approaches and institutional settings
March 13th 2017, Luang Prabang*



Outline

- Context
- Developing agro-processing in Laos
- Objectives and philosophy
- Examples of activities in partnership
- Do we contribute to sustainable development in the Lao Uplands?
- Ways forward

Context (1/3)

1. Consumption trends: an increasing demand for livestock products (hence animal feed) in SEA.

Region	Meat (kg/capita/year)			Milk (kg/capita/year)		
	1964-1966	1997-1999	2030	1964-1966	1997-1999	2030
World	24.2	36.4	45.3	73.9	78.1	89.5
Developing countries	10.2	25.5	36.7	28.0	44.6	65.8
East Asia	8.7	37.7	58.5	3.6	10.0	17.8

http://www.who.int/nutrition/topics/3_foodconsumption/en/index4.html

Context (2/3)

2. Current situation in Laos

- **Livestock products imported** from neighboring countries
- **Limited animal feed processing:** raw material exported to neighboring countries (FAOstat: *3 million tons of cassava and 1.5 tons of maize produced in 2016 in Laos... and mostly exported*)
- **Concentrate feed imported** for fish, poultry and pig production



Context (3/3)

3. Trade in agricultural commodities (Lao-Thai 2016)

• Lao Imports	28,355 million Baht
- Live pig	3,235 million Baht
- Pig parent stock	0,564 million Baht
- Animal feed	0,333 million Baht
• Exports	5,212 million Baht
- Cassava chips	1,759 million Baht
- Cassava roots	0,523 million Baht
- Bananas	0,160 million Baht

Source : OAE Thailand

Developing agro-processing in Laos

1. At the national level

- **2 factories for animal concentrate feed** production located in Vientiane (Nong Teng) and Luang Prabang (Nam Nam bac)
- **1 slaughter and packaging facility** (Nam Xuang) to promote Lao fresh meat and consumption in urban center markets.



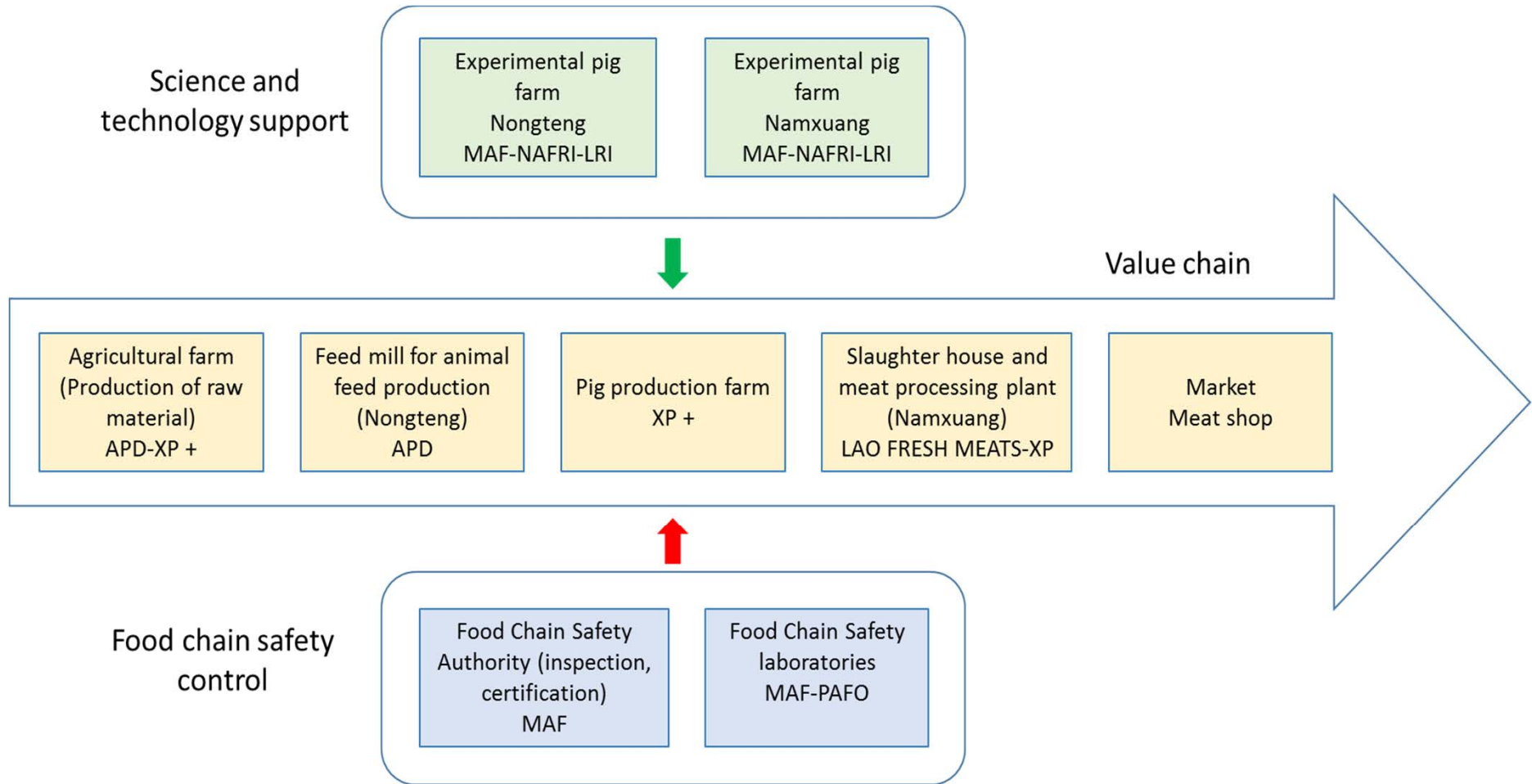
<https://www.facebook.com/LaoFreshMeats/>

Developing agro-processing in Laos

2. Operating concept

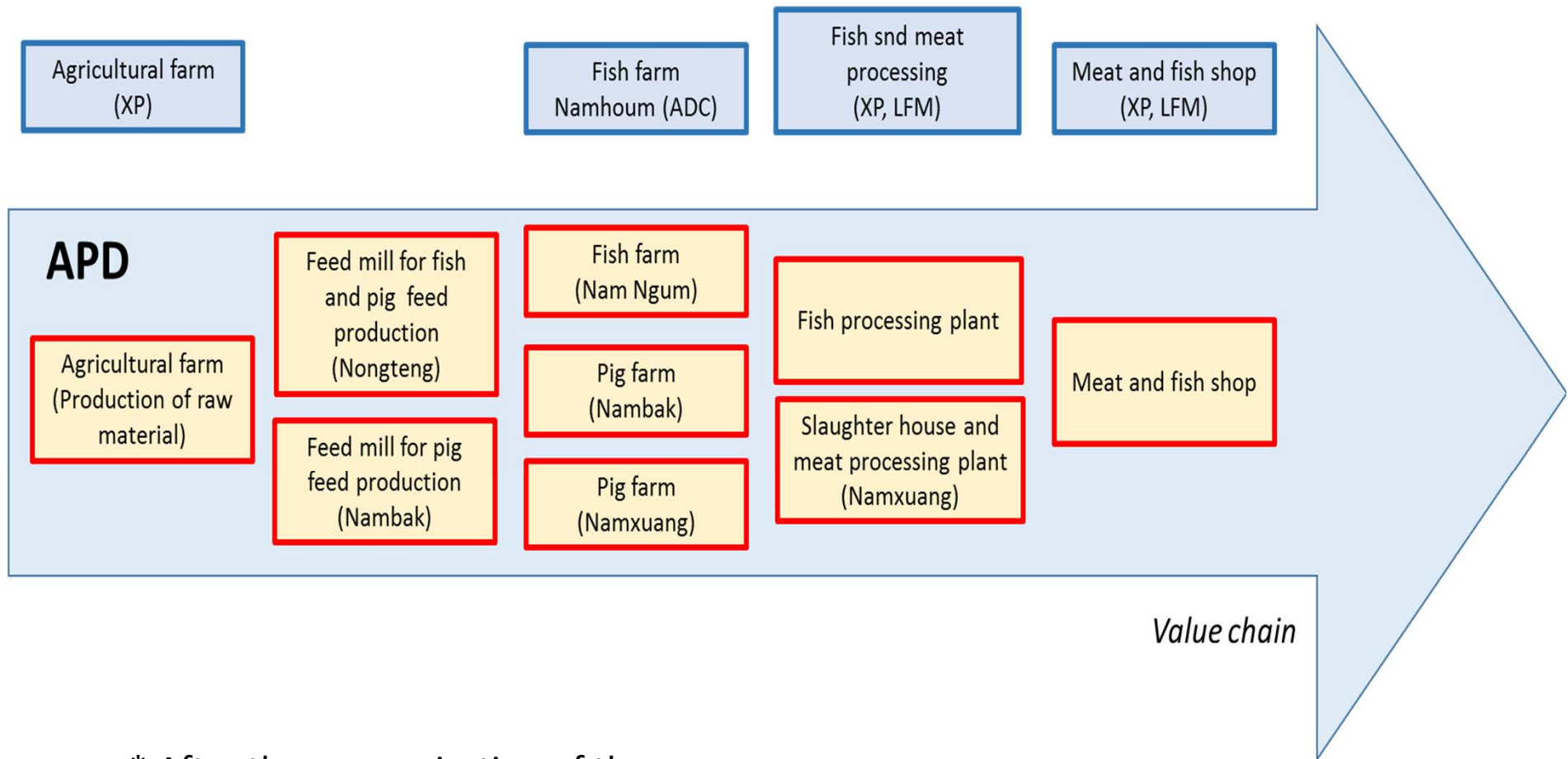
- **Close collaboration** with a Hungarian tied aid loan program.
 - aims to establish an integrated production system of pig and fish;
 - profit will be realised through the marketing of the final high quality and safe meat and fish products.
- Legal background of the operation is an **Agreement with the Ministry of Finance**. The PPP contributes to the sustainability of the results of the tied aid loan program and also to the payback of the loan.
- Includes demonstration and extension components and research & development projects.

“Pig integration” scheme



Facilities to be operated by the APD*

Partners



* After the reorganization of the company

Developing agro-processing in Laos

3. At the local level:

- Establish **Harvest Centers** and **Post-Harvest Centers** to meet the drying, storage and feed making needs of village farmers (XP trading Co.)



Grain bins



Ovens with fans



Hoppers with baggers

Objectives and Philosophy

1. Develop local (Lao) entrepreneurship

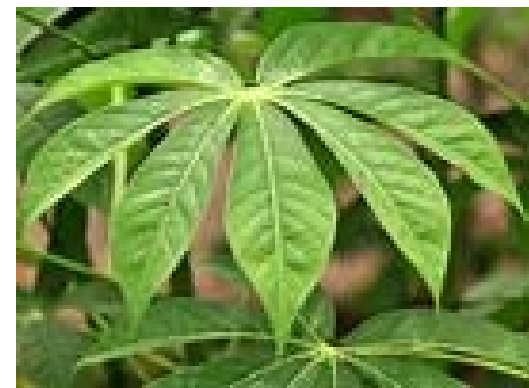
- APD is **Lao majority-owned** company (70%)
- Objectives of 1) increase **local production** of pork, eggs, poultry and beef for the local and urban center demands using **local breed** (pig); 2) Develop Lao-produced raw commodities, specifically targeting **proteins production** for concentrate feeds



Soybean



Black Soldier Fly larva



Cassava leaves

Objectives and Philosophy

2. Invest on quality – food safety

- Invest in **feed quality control** lab (Nong Teng, 2018)
- Control the level of pesticide residues on inputs (raw material) and outputs (concentrate feed)
- **No antibiotics** added to the concentrate feed
- **No preservative** added to the fresh meat sold



Example of activities in partnership

1. Promoting soybean production

- In partnership with projects and local PAFO/DAFOs (Xkg, Lpg)
- Investing in **trust building** with farmers (XP trading):
 - Visit of the processing factory
 - Commitment to buy up to 2,000 tons of soybean (2017)
 - Guaranteed minimum price according to quality (3,500 LAK/kg for grade A and 3,000 LAK/kg for grade B)
 - Donation of a soy/corn dryer



Farmers visiting XP trading factory in Xieng Khouang 2017

Example of activities in partnership

2. Improving local breed (pig) and cassava leaves protein content with NAFRI
3. Valorizing local recycling solutions
 - Purchase of BSF dry larvae and maggot meal with Waseco Co. (Waste Eco solution) as protein source for concentrate feed



Research & Development Projects

- **Research** has been carried out in cooperation with **NAFRI** and **NUoL** in the following areas:
 - use of non-conventional protein resources (e.g. insect protein, Artemia)
 - closing the life-cycle of indigenous aquatic species;
 - development of feed formula for indigenous species (pig and fish);
 - nutrient recycling in farming systems;
 - sustainable intensification in animal and fish farming;
 - development of post-harvest technologies;
 - development of organic production and certification;
 - marketing and consumer's communication.

Do we contribute to sustainable development in Lao Uplands?

Some questions

- Does the initiative support the adoption and dissemination of **diversified farming systems and/or agro-ecological practises**?
- Does it support **smallholder farming** and **community-based agricultural development**?
- Are the **public benefits** anticipated from the PPP partnership **clearly defined**?
- Are investment contributions and **risks shared**?
- Do **all partners play an active role** at various stages of the PPP project life-cycle?

Do we contribute... (ctd.)

Criteria	Assessment/ expected results
<ul style="list-style-type: none"> ▪ Agroecological practises 	<ul style="list-style-type: none"> ▪ Promotion of locally-produced protein sources and of N-fixing legume crop that will contribute to soil fertility improvement ▪ Support recycling (BSF, pig manure recycling)
<ul style="list-style-type: none"> ▪ Smallholder farming and community-based development 	<ul style="list-style-type: none"> ▪ Directly through Harvest and Post-Harvest Centers ▪ Indirectly through partenership with projects and agricultural extension agencies
<ul style="list-style-type: none"> ▪ Expected benefits clearly defined 	<ul style="list-style-type: none"> ▪ Alternative income to maize (income diversification) ▪ Soil quality improvement ▪ Reduced farmers dependancy to external inputs (imported AI feed and fertilizers)
<ul style="list-style-type: none"> ▪ Shared investment and risks 	<ul style="list-style-type: none"> ▪ Initial investments mainly supported by APD ▪ Production risks supported by farmers
<ul style="list-style-type: none"> ▪ Active roles for all partners 	<ul style="list-style-type: none"> ▪ APD: market, capacity building (harvest centers Mgt) ▪ District: technical advisory, facilitation ▪ Producers: implementers

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Ways forward

- Limited human resources to engage directly into GAP / eco-friendly innovation design and promotion with farming communities
- But ready to develop partnerships and support all initiatives in line with our objectives and philosophy i.e:
 - Develop agro-processing in Laos
 - Develop local (Lao) entrepreneurship
 - Improve the quality & safety of inputs (raw materials) and outputs (animal products)



Thank you for your attention