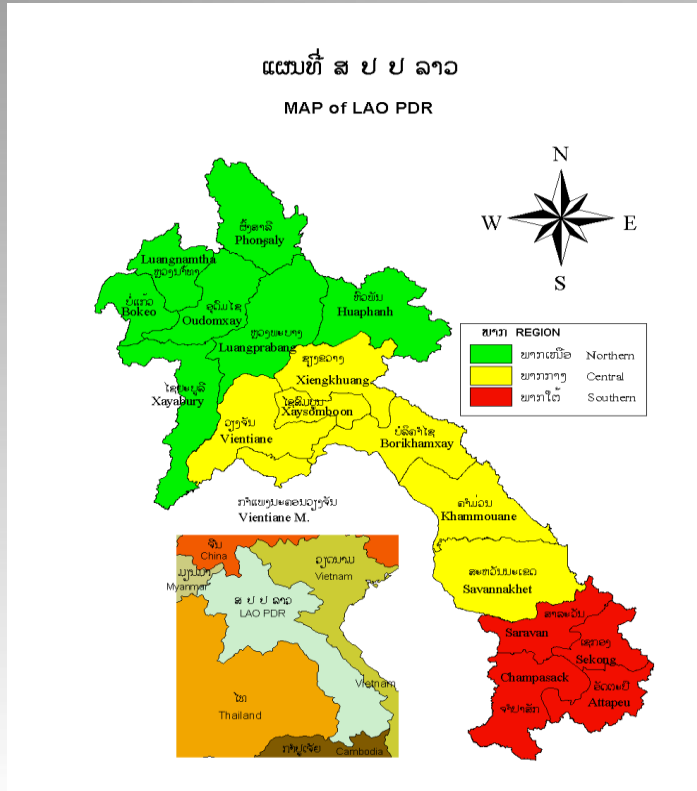


A photograph of a tobacco field in a rural landscape. The foreground shows rows of young tobacco plants in a field. In the background, there are lush green trees and a range of rugged, brown mountains under a clear blue sky. The entire image is framed by a light blue border.

Seed Development in Lao PDR

By: Mr Vandy PHETPASEUTH
Vice Director of Agronomy Management Division,
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Introduction



❖ Land Area: 236,800 sq.km

❖ Population: 6.8 Millions

Laos is a land lock country

❖ Vietnam to the east (2,069 km),

❖ Thailand to the west (1,835 km),

❖ Cambodia to the South (435 km),

❖ China to the North (505 km),

❖ Myanmar to the North-West (236 km).

- ❖ Lao PDR is largely an agrarian society with 80% of people living in rural areas.
- ❖ Major crops in the country are mainly rice, maize, Cassava, grain legumes, oil seeds, root and tubers, coffee, cotton, fruits, nuts, vegetables, tobacco, and others...



- Rice is the staple for about half of the world's population,
 - Increasing of population, but planting areas are decreased
 - Government policy:
 - In 2015: 4.2 mill. tons
 - In 2020: not less 5.2-5.5 mill. tons
 - Market needed (quality and quantity)



Government Policy:

- ❖ The government policy in the agricultural sector gives priority to increasing crop and livestock production in order to ensure food security such as rice and other crops
- ❖ Agricultural production promotion policies focus on timely supply of Agriculture inputs such as improved seeds, fertilisers, insecticides, pesticides, and agricultural tools at prices affordable to farmers.



Long term objectives towards the year 2020

- ❖ Improve productivity continuously by applying successes and advancement of world sciences and technologies in agriculture and forestry (agricultural intensification technologies),
- ❖ Utilizing high quality seeds, tree species, so as to modernize gradually the sector of agriculture and forestry which constitutes firm basis for gradual industrialization.



Regulation or Laws related to PVP System

- Law on Intellectual property (No. 01/NA, Date 20 December 2011);
- Ministerial Decision on the implementation of the law on Intellectual Property concerning Patent and Petty Patent, No. 752/MOST date 20 September 2012.

This Law determines the principle regulation and measures relating to the promotion of inventions, creativity, knowledge-based economy, management and protection of intellectual property rights,

Organization related to PVP

**Ministry of Agriculture
and Forestry**

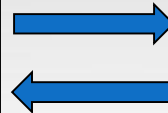
**Ministry of Science and
Technology**

**Department of
Agriculture**

**Department of
Property Right**

(Seed Certificate, Seed Legislation,
DUS Test and Seed Quality control)

(Plant Variety Protection)



Regulation or Laws related to Seed and Seedling Production

Agreement on Management and Use of Plant Variety (Ministry Agreement, No.3919/MAF, 12 December 2012).



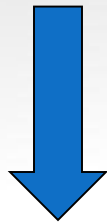
Defines principles, rules and measures regarding to gathering, conservation, research, multiplication, certification, registration, production and conducting business on plant variety in order to control and ensure to increase the high of crops production, sustainability of food security

Seed Distribution

Research Institution



**Extension Companies
Or NGO organization
Or Farmer Group**



Individual Farmer

Import Country



**Extension
Companies
Or Retailer shop**



Individual Farmer

Regulation or laws related to Seed Testing and Seed Quality control System

Manual on Rice seed quality control, date on November, 2012 and Rice Seed Quality Certificate System date on 30 April, 2013.

This manual defines principle and process of Rice seed quality control such as accreditation of seed growers, field inspection of rice seed production areas, and Laboratory of rice seed control (seed sampling, purity test, moisture test and germination test).



Regulation on Plant breeding Activities

Manual of rice research and production system in Lao PDR, date 4/08/2005.

This manual defines principle of rice research and production system such as basic seed, Foundation Seed, Registration Seed and Certified Seed).



Research components

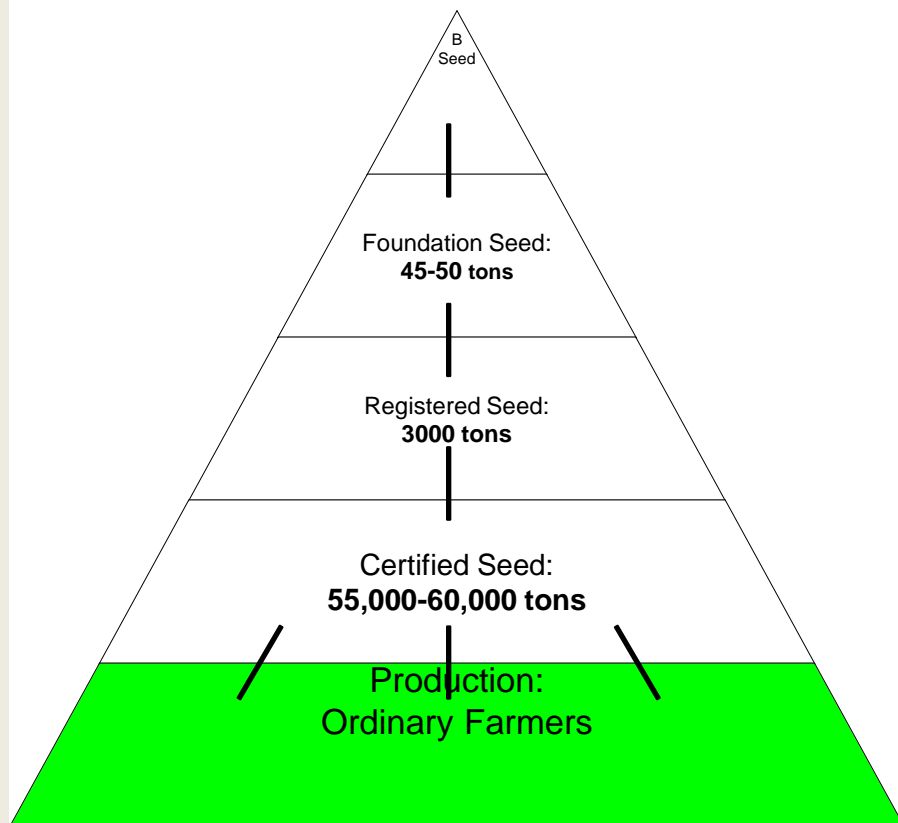
❖ Short term

- **observation and evaluate local varieties and introduce direct to farmers use**
- **Introduce varieties/fixed lines from other research center in country and abroad**

❖ Long term: develop new varieties

- **Crossing**
- **Select segregated and fixed from research center in country and abroad**

Plant Breeding Activities



Responsible Agency:

Breeder Seed:

N-ARC, TSN-SMC, PNG-SMC and LNT-SMC

Foundation Seed: TSN-SMC, PNG-SMC, LNT-SMC, SNSs and PAFO/DAFEO (on station and on farm in collaboration with farmers)

Registered and Certified Seed:

TSN-SMC, PNG-SMC, LNT-SMC, SNSs and PAFO/DAFO (on Station and farm in collaboration with farmers)

Achievement 1991-2011

Improved varieties were released :

1993: TDK₁, TDK₂

1994: PNG₁

1995: PNG₂

1997: TDK₃

1998: TDK₄, TSN₁, NTN₁

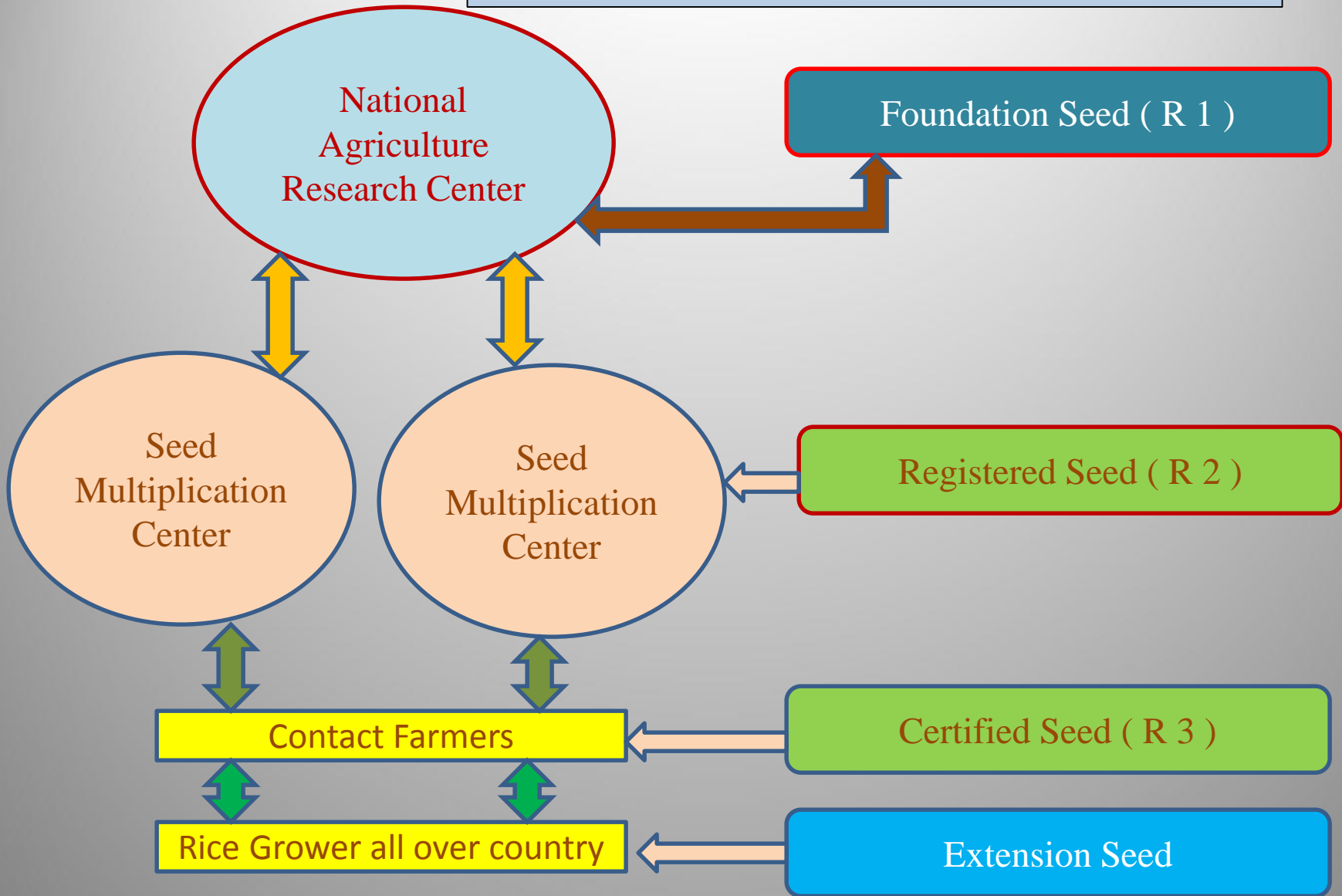
2000: TDK₅

2002: TDK₆, TDK₇^{*}, PNG₃

2003: TDK₈, TDK₉^{*}, TDK₁₀, PNG₅^{*}

2009: TDK₁₁^{*}, TSN₅^{*}, TSN₆^{*}, TSN₇^{*} and
Homesavan^{*}

Rice Seed production System



Research Center

- Northern Region

1. LNT-SMS

2. HK-SMS

3. NTN-SMS

- Central Region

4. PC-SMS

5. N-SMS

6. **N-ARC**

7. NH-SMS

8. TK-SMS

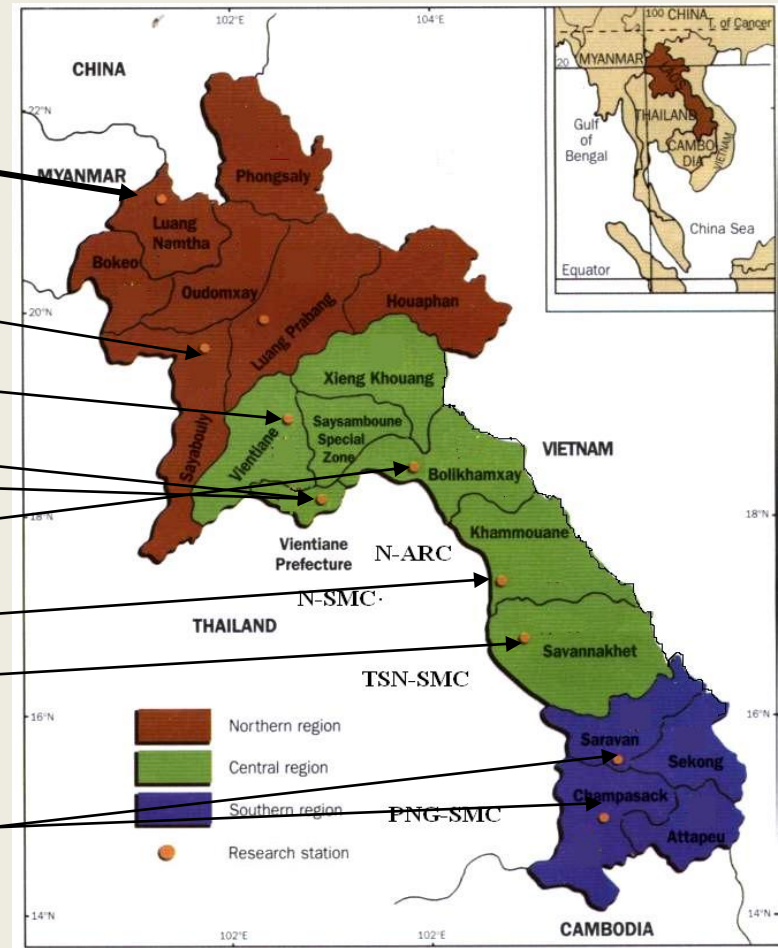
9. VP-SMS

10. **TSN-SMS**

- Southern Region

11. PNG-SMS

12. ND-SMS



Current Problem

- ❑ Knowledge on PVP for Lao People is at Low level of course, we have attended some trainings and workshops on PVP abroad, but our skill and environment is not enough yet for setting up the PVP system.
- ❑ The methods, solution, technical documents, testing instruments, facilities & infrastructure being introduced to improve DUS testing not yet established,
- ❑ The testing instruments, facilities & infrastructure being introduced to improve seed quality control and not yet established,
- ❑ Budget for invest to the Testing (Laboratory for DUS Test, Seed Testing)



THANK YOU