

## Multistakeholder workshop: Introduction of the Livestock CRP project “Livestock-led interventions towards equitable livelihoods and improved environment in the North-West Highlands of Vietnam”

Mai Son District People Committee, Son La, June 2nd 2020



### 1. WORKSHOP OBJECTIVES

- Present the objectives of the project and the results of the project baseline
- Discuss and get feedback on the project timeline and proposed activities

### 2. AGENDA

08:30	Introduction of participants and objectives of the meeting Welcome remarks	Ms. Mai Thanh Tu, Project field coordinator, ILRI/CIAT <ul style="list-style-type: none"> <li>▪ Ms. Cam Thi Khay, Representative of Mai Son District People Committee</li> <li>▪ Mr. Nguyen Ngoc Toan, Sub-DAH</li> <li>▪ Dr. Sabine Douxchamps, PI, Alliance Bioversity-CIAT</li> </ul>
09:00	Project introduction	Dr. Nguyen Viet Hung, Co-PI, ILRI
09:30	BREAK - Coffee and Group photo	Participants
10:00	Presentation of the baseline results	<ul style="list-style-type: none"> <li>▪ Mrs Nguyen Thi Thinh, ILRI</li> <li>▪ Dr. Nguyen Phi Hung, NOMAFSI</li> </ul>
11:00	Participants feedback	Ms. Mai Thanh Tu, ILRI/CIAT
12:00	LUNCH	
13:30	Presentation of the project activities and timeline - Animal Health - Animal Genetics	<ul style="list-style-type: none"> <li>▪ Dr. Hu Suk Lee, ILRI</li> <li>▪ Assoc. Prof. Dr. Le Thi Thanh Huyen, NIAS</li> <li>▪ Dr. Mary Atieno, Alliance Bioversity-</li> </ul>

	<ul style="list-style-type: none"> <li>- Feeds and Forages</li> <li>- Environment</li> <li>- Livelihoods</li> </ul>	CIAT <ul style="list-style-type: none"> <li>▪ Dr. Sabine Douchamps, Alliance Bioversity-CIAT</li> <li>▪ Nguyen Thi Thinh, ILRI</li> </ul>
14:00	Group discussion in 3 groups: <ul style="list-style-type: none"> <li>- Does this intervention activity make sense?</li> <li>- What is missing and how to improve it?</li> <li>- With whom do we have to work and influence?</li> </ul>	<ul style="list-style-type: none"> <li>▪ Group 1: Animal Health facilitated by Dr Bui Nghia Vuong</li> <li>▪ Group 2: Livelihood and environment, Mrs Thinh Nguyen</li> <li>▪ Group 3: Livestock, Dr Le Thi Thanh Huyen</li> </ul>
16:00	BREAK - Coffee	
16:30	Participants feedback	Mai Thanh Tu, ILRI/CIAT
17:30	CONCLUSION & CLOSE	
18:00	Dinner at Pien Lanh Restaurant Address: TK6, Hat Lot town, Mai Son district	

### 3. BASELINE RESULTS

- Household types

- the participants suggest investigating further potential correlations between the two variables used for the typology
- some participants do not understand really the types presented.
- the participants suggest considering a grouping based on income/wealth or altitude/ethnicity instead.

Wealth would be like the government types for mountainous communes year 2016 - 2020 (The Decision QD 50/ 2016 – QD-TTg), article 3: Communes in ethnic minority and mountainous areas are defined according to three areas: Commune Region III is a commune with extremely difficult socio-economic conditions (poor >65%); Commune of Region II is a commune with difficult socio-economic conditions but has temporarily stabilized (poor >30% & <65%); Commune area I is the remaining communes (less than 30% of poor households). Chiang Chung and Chiang Luong belong to Region II. This classification is at commune level, and is based on poverty rates, topography and distance to roads, presence of cultural center, conditions of human health center, condition of schools, and WASH.

Climate, associated with appropriate crops and different ethnic groups with different livestock practices (combining ecological regions and ethnicity):

- o <600m: Thai ethnic
- o 600m – 800m: Thai ethnic, Kinh ethnic
- o >1000m: Hmong ethnic (cattle die a lot in winter)

- Breeds

- Some people think that local people prefer local breeds (local Pig, Mong Cai, Mong cow) due to climate change adaptability and market demand, and because of the association with program 135.
  - Indigenous pigs and cattle (like Ha Giang cattle) are more resistant
- There have been no improved breed for buffaloes.

- AI

For pigs: more common in communes along National route 6 and less in communes of regions 2 and 3. For cows: nature mating.

#### 4. FEEDBACK ON ACTIVITY PLAN

Discussions were good, but went a bit backwards, discussing again constraints and what we should do. Still, participants were very enthusiastic.

- Genetics: time is very limiting, too short to see results, but the demonstration/ pilot interventions should be implemented then the extension can be done latter; Looking for breeds/ crossbreeds for high productive adaptation and performance
- Health: people are happy about the plan, and discussion went into implementation details. Care will need to be taken to ensure this flagship does not take off too much in advance of the others, and that we approach the communities as a team. Training materials will need to have the same style/template. Discussion of coordination with Genetics has started.
- Feeds and Forages: Huge knowledge gap hence potential in integration and effective utilization of feeds and forages for animal nutrition, especially forage legume biomass, feed preservation and drought- and cold-resistant forage grass varieties.
- Environment: participants found the activity plan appropriate, however the most environment-related person had left the meeting before the group discussions.
- LLAFS: high potential for LLAFS to work with local authority to develop an OCOP (One commune one product) trademark for dried beef/buffalo meat.

Detailed outputs for each flagship are given in annexes.

#### 5. MEDIA COVERAGE

<http://trangtraiviet.vn/son-la-chan-nuoi-huong-toi-phat-trien-ben-vung-o-vung-cao-20200602110343223.htm>

<https://vnanet.vn/vi/anh/anh-thoi-su-trong-nuoc-1014/son-la-gioi-thieu-du-an-phat-trien-chan-nuoi-huong-den-sinh-ke-binh-dang-va-ben-vung-khu-vuc-vung-cao-tay-bac-4744029.html>

<https://dantocmiennui.vn/phat-trien-chan-nuoi-huong-toi-sinh-ke-ben-vung-o-vung-cao-tay-bac/288788.html>

<http://sonlatv.vn/tin-tuc-n10439/hoi-thao-gioi-thieu-du-an-can-thiep-dua-vao-chan-nuoi-huong-toi-sinh-ke-binh-dang-va-ben-vung-vung-cao-tay-bac.html>

## ANNEXES

### A1. List of participants

No	Name	Institution	Mobile	Email
<b>CGIAR and national partners</b>				
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## A2. Feedback on Genetics

Participants (9): communal vets., communal officers responsible for agriculture, and researchers

Content	Cattle (and buffaloes)	Pigs
Outcome	<ul style="list-style-type: none"> <li>- Improvement of breed quality, both for dam and sires (increase body weight)</li> <li>- Increase in accessing to the AI services</li> <li>- Improvement of knowledge in breed selection and information about good and suitable breeds</li> </ul>	<ul style="list-style-type: none"> <li>- Improvement of breed quality, both for dam and sires, both for productivity and productive adaptation</li> <li>- Improve productivity for local breed, and also crossbreeds to increase commercial outputs from local pigs</li> <li>- Improvement of knowledge in breed selection and information about good and suitable breeds</li> <li>- Increase capacity of performing AI of farmers</li> <li>- Availability of semen from good boar of local breed at the community</li> </ul>
Motivation	<ul style="list-style-type: none"> <li>- Development of livestock production to increase regular income, improve livelihood of farmers, these are in line with development strategy of local authority at different levels and farmers themselves</li> <li>- Land are available for raising ruminants</li> </ul>	<ul style="list-style-type: none"> <li>- Development of livestock production to improve livelihood for all types of farms are in line with development strategy of local authority at different levels and farmers themselves</li> <li>- Especially pig production (both quantity and breed quality) need to be recover as soon as possible after different shocks of price and diseases (African Swine, PRRS, and FMD) during 3 years from 2017</li> </ul>
Opportunities	<ul style="list-style-type: none"> <li>Support from government/province for semen sources to improve local cattle body weight</li> <li>- In addition, cow semen can be purchased from private farms or companies inside or outside the province.</li> <li>- Currently, a number of households have gradually shifted cattle farming towards commercial production (annually sale of cattle)</li> </ul>	<ul style="list-style-type: none"> <li>- Sources of exotic pig semen are readily available and readily available: along Highway 6 or breeding farms/ private IA stations</li> <li>-Farmers can learn and perform AI for pigs</li> <li>- Local authority support strongly for recover the pig herds with good quality after the shocks</li> </ul>
Challenges	<ul style="list-style-type: none"> <li>- Agriculture extension workers/ veterinarians carry out artificial insemination of cows, but only access to the near town villages/ commune along Road 6, not yet in the study areas and many other communes</li> <li>- Many local cows are very small.</li> <li>- Free grazing is existed, leading to:               <ul style="list-style-type: none"> <li>• Uncontrol mating; difficult to recognize heating time of cows</li> <li>• Low knowledge in breed selection for a good reproductive cow</li> </ul> </li> <li>-A part of the population believes that if the cows are naturally mating the calves are born stronger, have better ability to adapt and fight disease; In addition, cattle owners do not want to pay for AI.</li> </ul>	<ul style="list-style-type: none"> <li>- Household farm are difficult to get good exotic sows</li> <li>- Ban pig are mainly for home consumption</li> <li>- Inbreeding results in poor quality of the offspring in Local pigs</li> <li>- Pure Ban pigs are mainly existed in very remote area, good sows/ boar of Ban pigs are not available around</li> <li>- Scavenging Ban pigs results to parasites; penned pigs are low growth rate. Ban pig are slowly growing, even high price but still low economic value as very long time of raising. If Ban pigs are too fat, can not be sold.</li> <li>Therefore, the efficiency of Ban pig husbandry is poor, and farmers do not want to invest to production for commercial purpose, just mainly utilize available resources.</li> </ul>
Activities	<ul style="list-style-type: none"> <li>- Training on breed selection for farmers</li> </ul>	<ul style="list-style-type: none"> <li>- Training on breed selection for farmers</li> </ul>

<p>suggested for successful improved genetic interventions</p>	<ul style="list-style-type: none"> <li>- Training AI techniques and synchronized AI for communal and village vets</li> <li>- Building up demonstration farms in some villages: criteria for pilot cases selection: who willing to join and want to develop cattle production; keep cattle in pen, owning good cows (meeting selection criteria for AI); performing synchronized AI for several farms in the village (good for sale, and also for AI services)</li> </ul>	<p>and boar keepers</p> <ul style="list-style-type: none"> <li>- Training AI techniques for farmers</li> <li>- Training synchronized AI for communal and village vets</li> <li>- Support for village boar keepers to raise good boars (both exotic and local breeds) and training boars for semen exploitation for AI</li> <li>- Building up demonstration pig groups in a village or in some neighboring villages, both for Ban and exotic pig groups. Group members are who willing to participate, including boar keepers and farmers raising pigs in pens and owing selected good sows.</li> <li>+ Boar keepers are supported in selecting and accessing to good boars and are training for exploiting semen of boars for AI, particularly of who keeping Ban boars as no one in the region has been exploited semen of Ban boars for AI. Ban Boar keeper also need some support from the group and project to maintain the good boar to produce pure sows for farmers in the group.</li> <li>+ Application of synchronized AI for sows (both white pig and Ban pig, pure and crossbreeding), especially, managing the time of performing synchronized AI to produce more Ban pigs or crossbred Ban pigs to be consumed before Tet and in wedding and festival seasons</li> <li>- In addition:</li> <li>+ member of the group can work together on animal husbandry and sales</li> <li>+Develop pig husbandry and health care procedures to shorten the period of raising Ban Pig, increase gain weight, reduce fat rate, and sell when the market needs a high supply: Eg improve feed after weaning, training farmers to use available feed source to make suitable feed ration, then rearing traditionally methods to reduce fat, sell on Tet holiday ... ..</li> </ul>
<p>Linkages with other issues</p>	<ul style="list-style-type: none"> <li>- Marketing</li> <li>- Feeds and forages</li> <li>- Animal health cares</li> </ul>	

## Detailed Breed discussion

<p>Current status</p> <ul style="list-style-type: none"> <li>- Most of pigs and cattle are gazed, leading to:</li> <li>• Uncontrollable timing of oestrus</li> <li>• Poor breed quality</li> <li>• Inbreeding result in poor breed quality             <ul style="list-style-type: none"> <li>- When crossbreeding local cow with crossbred cow by AI, local cow usually died because the calve is too big</li> <li>- Lack of good quality breed</li> <li>- A part of farmers think that when the cows are naturally fertilized, the calves are born stronger, have better ability to adapt and fight disease; In addition, cattle owners do not have to pay for fertilization.</li> <li>- Gazed animals have higher chance infected with parasites.</li> <li>- Low economic value due to low weight but long raising time</li> </ul> </li> </ul> <p>Because of these shortcomings, the efficiency of husbandry is poor.</p>	<p>Advantages</p> <ul style="list-style-type: none"> <li>- The source of artificial semen for cows is supplied by the government; people from the agriculture extension center will carry out artificial insemination of cows. In addition, cow semen can be purchased from private farms or companies in the province.</li> <li>- Source of pig semen are available, easy to buy: along national route 6</li> </ul>
<p>Solutions</p> <ul style="list-style-type: none"> <li>• Improve local breeds ( pigs, cow, buffaloes)</li> <li>• Training for farmers:             <ul style="list-style-type: none"> <li>+ How to choose good breeds</li> <li>+ Avoid inbreeding, well nourish</li> <li>+ Management of mating, AI</li> </ul> </li> <li>• Building a pilot model:             <ul style="list-style-type: none"> <li>+ Form groups of household</li> <li>+ Implement captive breeding, fertilization simultaneously to control the breeding from quality assurance seed.</li> <li>+ Teamwork to work together on animal husbandry and sales</li> <li>+ Develop animal husbandry procedures to shorten the period of raising local Pig, gain weight, reduce fat, and sell when the market needs a high supply: Eg fattening in the first phase, then rearing by natural methods to reduce fat, sell on Tet holiday ... ..</li> <li>+ Governments organize and manage to ensure that the model works in the right direction.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• cooperative / group work, increase in AI adoptionOutput market</li> </ul>



### A3. Animal Health

Focus should be given on the following diseases:

Species		Chieng Luong	Chieng Chung
Cattle( buffaloes, cow)	pasteurellosis	✓	✓
	FMD	✓	✓
	Parasites	✓	✓
	Scabies	✓	✓
	Anthrax		✓
Pigs	AFS	✓	✓
	FMD	✓	✓
	Leptospirosis	✓	✓
	pasteurellosis	✓	✓
	Anthrax		✓
	cysticercosis	✓	✓
Poultry	Flu	✓	
	Newcastle	✓	
	pasteurellosis	✓	

#### Biosecurity

<ul style="list-style-type: none"> <li>• livestock farmers do not have the concept of biosecurity</li> <li>• Smallholder are not eligible to receive Vietgap certificates</li> <li>• District authorities are encouraging farmers to apply biosecurity in livestock</li> </ul>	→ Livestock farmers need to know how to apply biosecurity on to their farms.
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Vaccine: province vaccine program:

- FMD, pasteurellosis ( in cattle)
- Newcattle
- CSF

The vaccination program was not implemented at the right time due to the late budget, or the vaccination program was not fully implemented so that diseases still occurred.

#### Training content

farmers	Biosecurity, animals health What to do when diseases occur...
Animal health professionals : communes (2), villages (30), Commune agriculture extension worker (2),	Introduction of diseases by species outbreak investigation, data recording

### A4. Feed & Forages

#### Current status

Cattle feed mainly include green forage, elephant grass, bagasse, corn stalks, straw. In some place there is only *Pennisetum purpureum* (Napier grass), so there is no feeds for cattle from December to February. Chieng Luong grows a lot of sugarcane while Chieng Chung have lots of banana hence do not experience much feed shortage in autumn and winter. Rice residues is also utilized as source of feed for the cattle. Some farmers also grow a few legumes such as mung bean and black bean. *Megathyrsus maximus* (Guinea grass) and Mulato II are mainly grow in several demonstration farms and not yet adopted by farmers.

Feed for local pigs mainly comprise of banana trunk, taro leaves, sweet potato leaves and wild plants. Some leaves are dried for winter use. Hybrid pigs are mainly fed with concentrates.

### Challenges

- There is limited land to grow additional forages. Farmers do not pay much attention to grass planting: mainly growing grass on salvaged land, resulting in poor productivity and quality.
- Drought periods causes limited water availability to forage crops, while cold winter temperatures causes forage grasses such as Guinea grass to die.
- Limited knowledge on a diverse range of forage crop varieties and sustainable practices such as intercropping into current systems.
- Napier grass grown and fed to cattle is less nutritious, as they take advantage of the high growth rate, low water and soil nutrient requirements.
- Limited knowledge on F&F nutrition and management. For instance, the case with less nutritious Napier; Guinea grass is fed to cattle in high quantities (same as Napier), leading to overfeeding of cattle resulting to digestion problems; farmers perception of palatability of Mulato II because of its sharp/spiky leaves.
- Utilization of forage legume biomass is minimal as farmers only harvest and use the seeds, not knowing what to do the rest of the biomass.
- Feed preservation highlighted as a major issue.
- Local pigs have a lot of fat with less lean meat, farmer's perceive this to be linked to feed.

### Opportunities

- Integrate forages into existing systems without necessarily needing to expand their farms e.g intercropping of forage legumes, rotation with food crops, and improved grasses in contours.
- Increase awareness on F&F nutritional value, animal nutrition, benefits of forage crops to the farming systems e.g. improving soil quality, and improved crop management practices.
- Provide seeds/planting materials for forages both for improved (drought and cold resistant) grass varieties and different forage legume varieties for nutritious high protein feed.
- How best to utilize biomass of forage legumes for feed, better feed preservation from crop residues for winter storage? Know how to take advantage of some feeds besides grass such as bagasse, straw, corn and legume biomass
- How best achieve lean meat and reduce fat in local pig breeds, using improved feeds and forages?

### A5. Environment

- Erosion control measures are implemented in Mai Son
- Livestock:
  - Encourage farmer not to let cattle graze
  - Encourage farmer not to keep cattle under the floor
  - Livestock waste should be treated by composting as fertilizer for crops
- Solution to improve soil quality: Soil analysis should be conducted to consider the suitability of the soil for local crops, thereby adding the right nutrients to the soil and increase crop yield.

## A6. LLAFS

### Marketing and branding of livestock products

#### *SWOT analysis of Mai Son' farmers on livestock product marketing*

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>- Livestock products produced in Mai Son are well-known for high quality compared to other districts in the province. Thus, supply cannot meet demand.</li> <li>- Farmers in Zone 1, 2 (better-off villages, low altitude) have good knowledge and bargaining skills.</li> <li>- Good connection with National Road No. 6 leading to better market access compared to other districts</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>- Farmers in economic zone 3 (poor villages, high altitude) have poor knowledge, poor bargaining skills, so are often offered lower prices by traders.</li> <li>- Long value chains with numerous intermediaries, leading to low value added for the products produced by zone-3 farmers</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>- Ongoing consolidation trend in the marketing strategies (e.g. households working in groups to have better deal with traders or even have direct contact with slaughterhouses/processing companies)</li> <li>- Strong supports from the local government in developing and promoting OCOP trademarks for local products</li> <li>- Fair trades are organized annually for farmers to introduce local specialties</li> </ul>	<p><b>Challenges</b></p> <ul style="list-style-type: none"> <li>- Diseases (ASF in pigs, E-covid)</li> <li>- Heavy reliance on China</li> <li>- Trademarks will become a compulsory requirement for the products to enter formal outlets (supermarkets, convenient stores, etc.). However, developing a trademark requires large financial investment, which in many cases cannot be afforded by the farmers.</li> </ul>

#### **Branding of livestock products**

- It is not feasible to develop dried products from local pigs given their high content of fat. Currently, dried pork available in the market is made from hybrid or cross-bred pigs. Supporting the development of a brand for FRESH local pork is advised. Local pigs have some advantages compared to hybrid or crossbred pigs such as high disease resistance, high market demand and high price. The existing problems are their long production cycle (1-2 years vs 3 months of hybrid pigs) and scattered production (e.g. each household raises several pigs which reach marketed weight at different time. Thus, farmers cannot sell their pigs directly to traders who often require a certain number of pigs for each trip, but instead sell to small collectors at relatively lower prices). These problems can be fixed through the Genetics flagship's interventions. They plan to do community AI for local pigs, which can help to shorten the production cycle and to ensure sufficient amount of marketed pigs to deal directly with traders.
- High expectation from the local people to develop a brand for dried cattle and buffalo meat. Currently, some households are producing this product but not yet have a brand (trademark). There is good news that Mai Son district is progressing the development of a brand for dried cattle meat under a national program called "One Community One Product" or OCOP. This program encourages each community to develop one competitive and marketable product based on their local competitive advantages (local resources and knowledge). OCOP producers can be any of individual households, farmer groups, cooperatives, enterprises or associations. It usually takes 1 year to get a trademark approved. The products will be evaluated at two stages: district and provincial level. Products with 3 or more stars of OCOP standard at district level will continue to be evaluated at provincial level. Owners of OCOP products will receive financial aid from the

government up to 150-200 million VND/year each to maintain the business. The government Mai Son has 21 communes and they expect to have at least 21 branded products. So far, 5 products (all are crop products) have been granted the OCOP trademarks at the provincial level and those products can enter formal market outlets (supermarkets, convenient stores, etc.). For dried beef, the district is supporting one individual household in Hat Lot Town to apply for the OCOP brand, but the application package is stuck due to that household cannot maintain their monthly or quarterly production. Thus, the application has not been through yet. This is the point that our project can support, which makes our plan to have branded livestock products more feasible, particularly in a short time of only 1.5 years.