

International Livestock Research Institute

Improving safety of indigenous pork through better management of food safety and pork-borne parasitic diseases: sharing research findings and discussing interventions

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Hoa Binh, Vietnam



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Table of contents

Table of contents	3
Abbreviations and acronyms	4
Acknowledgements	5
Workshop summary	6
Workshop proceedings	6
Group discussion	6
Annex I: Participants & Programme	14

Abbreviations and acronyms

A4NH	CGIAR Research Program on Agriculture for Nutrition and Health
BMZ	Federal Ministry of Economic Cooperation and Development (Germany)
HUPH	Hanoi University of Public Health
ILRI	International Livestock Research Institute
NIVR	Vietnam National Institute of Veterinary Research
PBPDs	Pork borne parasitic diseases
Sub-DAH Hoa Binh	Sub Department of Animal Health and Livestock Production, Hoa Binh Province

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Grateful thanks are rendered to Vietnam National Institute of Veterinary Research (NIVR) and Hanoi University of Public Health (HUPH) for kindly co-hosting and contributing to the successful organisation of this workshop.

Workshop summary

The 'Improving safety of indigenous pork through better management of food safety and pork-borne parasitic diseases: sharing research findings and discussing interventions' workshop was jointly organised on 18 October 2019 in Hoa Binh City, Hoa Binh Province of Vietnam by NIVR, HUPH and ILRI. The workshop is part of the project 'Safer indigenous pork and healthier ethnic minorities in Vietnam through better management of parasitic pig-borne diseases' that is funded by the German Federal Ministry of Economic Cooperation and Development (BMZ).

This report summarises the discussions at the workshop and presents the key conclusions that were made to identify potential interventions to address pork-borne parasitic diseases (PBPDs) in Da Bac District, Hoa Binh Province for improving health of pigs and community at study sites.

The workshop objectives were:

- Share key research findings from the project to related stakeholders;
- Discuss potential interventions that can help improve safety of indigenous pork and reduce PBPDs in Da Bac District; and
- Agree on the project's intervention plan

The workshop brought together 30 animal production and human health experts in Da Bac District and Hoa Binh Province and researchers from NIVR, HUPH and ILRI. They discussed the key recommendations of the survey including how to work with communities in the province to change risky pig production and pork consumption practices.

The workshop included a combination of individual work, small group discussion and plenary discussion. In most sessions, groups were formed to facilitate conversation among the participants. At the end of each session, groups presented their findings with the help of flipcharts.

Workshop proceedings

The workshop was opened by Luong Thanh Hai, director of Hoa Binh Sub-department of Animal Health and Livestock Production (Sub-DAH), and Fred Unger, senior scientist, ILRI.

After that, the project researchers introduced the project, and key research findings on pig sampling and human sampling.

Most of the pig production in the province is characterized by free roaming of pigs, feeding pigs on raw foodstuff and occasional eating of raw pork, which increase risks of cysticercosis and trichinellosis spreading to humans.

The research result presented at the workshop shows that incidences of pork-borne parasitic diseases in northern Vietnam is relatively low than previously thought but behaviour change is needed to strengthen pork safety and reduce incidences of pork-borne illnesses in communities.

Seroprevalence studies assess the levels of a pathogen in a population as measured in blood serum. For this survey, blood samples were collected from 352 pigs in 131 surveyed pig farms and 300 people. Six pigs tested positive for cysticercosis and only two out of 300 volunteers tested positive for cysticercosis and trichinellosis.

At the end of the sharing session, Hung Nguyen, ILRI presented proposed interventions at the end of the presentation session. Presentations can be seen from this link

<https://www.dropbox.com/sh/ngamqbssx4mx/fmy/AAAj2aWDpJGTv-jo32mpFPsa?dl=0>

Group discussion

How to deal with seven suspected cases?

Sampling results showed seven suspected cases with two positive cases with cysticercosis and two positive cases with trichinellosis. Participants discussed follow-up interventions. They focus on how to raise awareness of local people about these two diseases through behaviour change communication.

Participants proposed asking seven suspected cases to health care centers to provide a poo sample for testing and treatment.

Researchers calls for improved pork production and changes in pork consumption practices to prevent the spread of cysticercosis and trichinellosis. Pig farmers are recommended to keep their pigs in pens to prevent the free roaming of the animals which exposes pigs to disease pathogens. They were encouraged to also adopt improved animal husbandry practices, better manage human waste and feed pigs with cooked instead of raw foodstuff to avoid parasites.

The best solution is to change pig keeping practices, not feeding pigs with raw vegetables and food. Cooking pig feed properly instead of feeding them with raw food. Regular mass deworming for local people in the province was also proposed.

However, Hai from Department of Health of Hoa Binh Province said that deworming for pigs is not feasible and can affect the quality of pork.

The next step to deal with seven suspected cases is that the project will confirm these cases, and send the name of these people to the commune health center who will contact the provincial hospital for testing.

Discussion on interventions

Group I

Intervention	Feasibility level (Ranking 1-100 score)	How to do	Required resources	Total score
Deworming				
Pig	50	Commune vet staff	Deworming drugs, District vet station, District Disease Control Steering Committee	60
People	80	Village health staff	Commune Local People's Health Management Steering Committee	
Hygiene practice				
Improve husbandry practices	60	<ul style="list-style-type: none">- Give up free range livestock keeping practice- Feed pigs with cooked food- Clean pig houses frequently- Waste management	<ul style="list-style-type: none">- Organize communication workshop- Financially support to upgrade pig houses- Commune health centre and Youth Union	80

Wash hands with soap	70-80	- Promote behaviour change communication for local people to wash hand with soap	Commune health staff to support communication	
Communication				
Training	80	<ul style="list-style-type: none"> - Target audience: vet staff, health staff, village heads, pig farmers - Channels: commune loudspeakers, local television and radio 	Commune People's Committee	70
Flyers and posters	15			
Communications at work				

Group 2

Intervention	Feasibility level (Ranking 1-100 score)	How to do	Required resources	Total score
Deworming				
Pig	60	- Training for vet staff and health staff at district and commune level - Communicate and implement interventions at commune level	- State budget - Financial support from the project - Financial contribution from local people	80
People	90			
Hygiene practice				
Improve husbandry practices	40-50	- Pilot semi free range livestock keeping model	- The project to support to develop a model of semi free range livestock keeping	70
Wash hands with soap	45-50	- Implement communication campaigns to	- Health sector to develop a campaign with support from the project	

		raise awareness of local people - Using flyers		
Communication				
Training	80-90	- Develop a detailed plan - Village health staff to visit all households for communicating key messages	- Animal health and human health sectors to collaborate with each other - The project to support the human health sector to develop flyers	90
Flyers and posters	100			
Communications at work	80			

Group 3

Intervention	Feasibility level (Ranking 1-100 score)	How to do	Required resources	Total score
Deworming				
Pig	50	- Implement deworming on both pigs and human	- Support finance and/or deworming medicines	40
People	30			
Hygiene practice				
Improve husbandry practices	10-15	- Pilot semi free range livestock keeping model	- The project to support to develop a model of semi free range livestock keeping	60
Wash hands with soap	75	- Build pigs houses considering biosecurity conditions - Give soaps to every households and schools - Health staff to visit every households for communication	- Financial support - Health staff, local authorities and related stakeholders	
Communication				

Training	80	<ul style="list-style-type: none"> - Organize ToT training for health and vet staff at commune and district level - Distribute flyers in trainings and meetings - Flyers and posters to be distributed in public places 	<ul style="list-style-type: none"> - Financial support - The project to support to develop flyer and poster contents 	75
Flyers and posters	80			
Communications at work	50			

Some selected photos of the workshop:

Giai pháp	Khoá thi (0-100%)	Cách thực hiện	Người thực hiện	Điểm lượng (0-100%)
Tập huấn	50	- Thuyết giảng (bằng lời)	- Thuyết giảng, BCD phân công đi các thôn xã, huyện, Quận, Huyện KP.	5
- Poster	80	- Poster, ảnh, ảnh (bằng lời, ảnh, ảnh)	- BCD và ảnh N.D. xã.	4
Thư viện	60	- Nền tảng (bằng lời)	- Học hỏi, tập huấn	1
- Thư viện	70-80	- Thư viện, ảnh, ảnh (bằng lời)	- Học hỏi, tập huấn	3
- Thư viện	80	- Thư viện, ảnh, ảnh (bằng lời)	- Học hỏi, tập huấn	2
- Thư viện	15	- Thư viện, ảnh, ảnh (bằng lời)	- Học hỏi, tập huấn	7
				75

Giải pháp	Mức độ khả thi	Cách thức thực hiện	Các nguồn lực hỗ trợ cần thiết	Điểm chung
Áp dụng tẩy gùn - Cho lợn - Cho người. Thực hành vệ sinh - Nuôi nhốt lợn - Rửa tay xà phòng	- 60% < Tẩy gùn cũ (thời) / hành phố. - 90% < ST quan trọng để được hiểu. - 40-50% < CH. Thát / Tẩy gùn. - 45-50% < Nhân thức / Sắp xếp lại xã hội + v.v.	- Tập huấn CB huyện/xã. - Xs. Tuyên truyền + thối. - Tổng kết, viết đề. - Quyển chuyển lại: bán chăn thả → Nuôi nhốt. - Chiến lược 3T (Hạt) / Tuyên truyền nhân thức / Tổ nôi.	- Kinh phí N ⁺ . - Tác nhân, DA. - Kinh phí h. dân. - Người dân / Dữ liệu / Mô hình (HCA). - Chiến dịch từ bên y tế ← Dự án.	80 70 400
Truyền thông - Tập huấn / họp - Tổ nôi, áp phích - Tuyên truyền tới thành thị.	- 80% / 90% / Thời gian. - 100% / Vết nôi. - 80% / Vết nôi.	- Kế hoạch trước, sau khi về quận - TP. Nhân viên y tế bàn đến từ chi. - Lồng ghép (VH + TY). - Dân y tế. - Tổ nôi.		40

NHÓM I

Cải tiến pháp can thiệp	Mức độ ưu tiên (1-5)	Các thiết bị/Thuật	Các các đơn vị/Thị trường	Cho các nhóm dân chúng
- Áp dụng tay găng + Chỗ lớn + Cho người	- 50 - 50	- Ca' lộn vĩa - Người hoặc lộn	- Hộ gia đình: Kudo phí (Thước) (cộng phí cho CB thực hiện) - Nguồn lực:...	40
- Cải thiện thực phẩm VS: + Nuôi nhốt + Rửa tay bằng xà phòng	- 30-40 - 10-15 75	- Chuồng Kéo (đảm bảo VS 7Y) - Quây nhốt lò quây lỵ - Pháo xạ tay đeo túi hồ sơ định + CB/y tế + Phòng học...	- Hộ gia đình: Kudo phí - Nguồn lực: CB y tế; Chẩn quyển địa Phương + CB quan liên quan tế + Phòng học...	60
- Truyền thông + Tập huấn:	+ 80	x Tập huấn: TOT cho CB y tế + Thuồng Xã + Chuẩn quyển	x Nguồn lực: Kudo phí < Tài x 1	75
+ Tổ Tài/áp phích Tổ Tài Áp phích	80 50	- Phối hợp với Tập huấn và các cấp hợp - Ở các thôn trung tâm	- Dữ liệu hỗ trợ	

Group discussion on interventions (photo credit: ILRI).





Photo credit: ILRI/Chi Nguyen

Annex I: Participants & Programme

Below one can find the list of participants, with their respective organizations.

No.	First name	Last name	Email	Sex	Institute/Company
1.	Nga	Vũ Thị	ngancvd@gmail.com	F	NIVR
2.	Thúy	Đỗ Thị Thu		F	NIVR
3.	Ngọc	Dương Như		F	NIVR
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14.	Hải	Lương Thanh		M	Hoa Binh SubDAH
15.	Trương	Trần Tiến		M	Hoa Binh SubDAH
16.	Tuấn	Nguyễn Văn		M	Hoa Binh SubDAH
17.	Hùng	Dương Mạnh		M	Hoa Binh SubDAH
18.	Đứng	Hà Văn		M	Mường Chiềng Commune Veterinary
19.	Quyết	Hà Văn		M	Cao Sơn Commune Veterinary
20.	Hùng	Lương Văn		M	Trung Thành Commune Veterinary
21.	Thiết	Xa Văn		M	Đoàn Kết Commune Veterinary
22.	Huy	Lương Văn		M	Tân Minh Commune Veterinary
23.	Hướng	Xa Thị		F	Giáp Đất Commune Veterinary
24.	Thức	Phạm Văn		M	Da Bac District Veterinary Station
25.	Vinh	Bùi Khắc		M	District Agriculture Department, Da Bac District People's Committee
26.	Hoạch	Nguyễn Văn		M	Butcher
27.	Toan	Nguyễn Thị		F	Retailer
28.	Thành	Xa Thị		F	Mường Chiềng Commune Health Station
29.	Ân	Xa Văn		F	Đoàn Kết Commune Health Station
30.	Thiên	Lương Huy		M	Trung Thành Commune Health Station
31.	Son	Ngô Thị		F	Giáp Đất Commune Health Station
32.	Phượng	Đinh Thị Bích		F	Tân Minh Commune Health Station
33.	Hạnh	Đinh Thị		F	Cao Sơn Commune Health Station
34.	Chăng	Hà Văn		M	Disease Control Unit, Da Bac District Health Center
35.	Hải	Vũ Quốc		M	Hoa Binh Provincial Health Department

Time	Activities	Person in charge
08.00-08.30	Registration	NIVR/ILRI
08.30-08.45	Opening remarks by Sub DAH Hoa Binh and ILRI	Representative, Sub DAH Hoa Binh Hung Nguyen/Fred Unger, ILRI
08.45-09.00	Project overview and linkage to SafePORK project	Fred Unger, ILRI
09.00-09.20	Results on pig sampling and survey	NIVR
09.20-09.40	Results on human sampling and survey	HUPH
09.40-10.00	Tea break	
10.00-10.20	Propose interventions	Hung Nguyen, ILRI
10.20-11.00	Group discussion on interventions	Pham Duc Phuc, HUPH
11.00-11.30	Group feedback and questions	All groups
11.30-11.50	Next steps and timelines	Fred Unger, ILRI
11.50-12.00	Wrap up and closing	Hung Nguyen, ILRI