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# The seed system landscape for improved forages in Vietnam: threats, trends and opportunities

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## INTRODUCTION

- Government and NGO programs work to improve the livelihoods of impoverished ethnic minorities in Vietnam's mountainous regions. One priority strategy is to promote the sustainable intensification of livestock production by encouraging the adoption of improved forages.
- Cattle production in Vietnam plays a crucial role in supporting the livelihoods of livestock producers, most of whom are small-scale farmers with small herd sizes and limited area for growing forages.
- Implementing incentive packages to encourage the adoption of innovations such as improved forages poses significant challenges in this subsistence-oriented model.
- Studies about promising forage grasses and legumes have focused on technical evaluation of performance and adaptability of forages to agroclimatic conditions. However, understanding market forces that shape the enabling environment for adoption has been limited.
- We analyze the functioning of the forage seed system and the business opportunities to expand the diffusion of the technologies among small cattle producers and ethnic minorities in the mountainous areas of Vietnam.

## METHODOLOGY

- The Five Forces Framework's Porter for Industry Analysis (Ghemawat & Collins, 2010) was used to describe the forage seed system in Vietnam while identifying business opportunities.
- Using a qualitative approach, a purposive sampling method was employed to ensure the representation of different stakeholders in the forage seed system.
- A total of 20 semi-structured interviews were conducted during July and August 2024.

## RESULTS

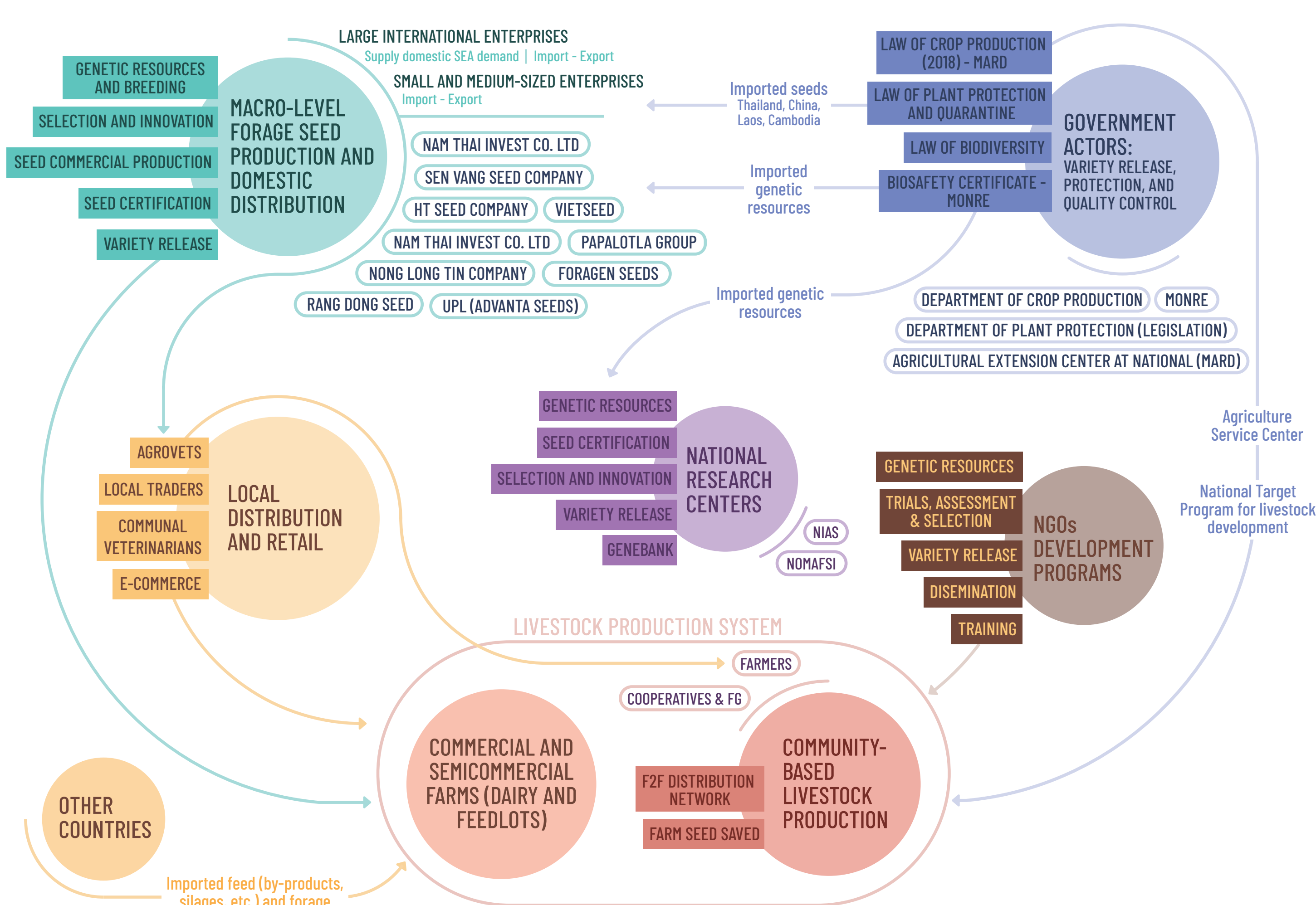


Figure 1. Mapping forage seed system in Northern Vietnam.

Table 1. Trends, threats, and opportunities for the forage seed market addressing community-based livestock production.

TRENDS	THREAT	OPPORTUNITIES
<ul style="list-style-type: none"> <li>Concerns on higher yield and quality varieties and soft stems such as green elephant grass, guinea Mombasa</li> <li>Increased awareness of ruminant production which requires, along with investment in feed roughage enough for whole year around, fresh and silage</li> <li>Farmers, including households, assess and seek information on forage online and contact for consulting and purchasing</li> <li>Multiple services supporting ruminant production, including forages</li> <li>Companies and research stations collaborate with farmers to produce seeds and cuttings to reduce transaction costs and availability at the localities</li> </ul>	<ul style="list-style-type: none"> <li>Fluctuation of the beef market—low price of beef—leads to cattle herd size reduction, resulting in farmers not investing in feed and going back to the high-volume varieties but cheap and productive or reducing the area of the forage crop</li> <li>Informal seed markets: un-registered seed; low price, low and no guaranteed quality</li> <li>Biomass maize for silage is competitive with forage grass</li> <li>Very limited studies on forage crops for new varieties from the last 5–10 years, just small trials done by international cooperation projects</li> </ul>	<ul style="list-style-type: none"> <li>Increase in high-performance beef and dairy breeds/crossbreeds those require forage varieties of high quality and with high quantities</li> <li>Agricultural extension or poor reduction programs for developing ruminant production are enclosed with forage programs in many localities under different local funding sources</li> <li>Online trading is becoming more and more – convenient and fast</li> <li>Seed companies provide seed – cheaper and easier than providing cuttings</li> </ul>

## CONCLUSIONS

- The beef market's volatility has been one of the biggest challenges for smallholders moving towards intensification, including adopting improved forages, despite farmers favoring these innovations. Further research can be carried out in this area.
- Community-based livestock production systems work between formal forage seed systems, through government and NGO's development programs, and informal systems based on F2F exchange.
- While access to innovative forage technologies is relatively easy for smallholders, scaling up their adoption requires reducing transaction costs while continuing to raise awareness and dissemination. Promoting and educating the demand and designing joint seed production strategies with private companies, government, cooperatives or farmer groups, and NGOs is necessary.
- Connecting with development programs promoted by the government and other entities is essential to boosting demand for forage technologies and reducing transaction costs through bulk purchases, especially for improved seeds from Thailand or Mexico (hybrids).

## REFERENCES

Ghemawat, P., & Collis, D. (2010). Mapping the business landscape. In Ghemawat, P. (Ed.), Strategy and the business landscape, 3rd ed (pp. 17–43). Prentice Hall

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