

# TO MAINTAIN VEGETABLE AGRO-BIODIVERSITY FOR NUTRITION SECURITY: INSIGHTS FROM ETHNIC MINORITIES IN NORTHERN VIETNAM

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## BACKGROUND

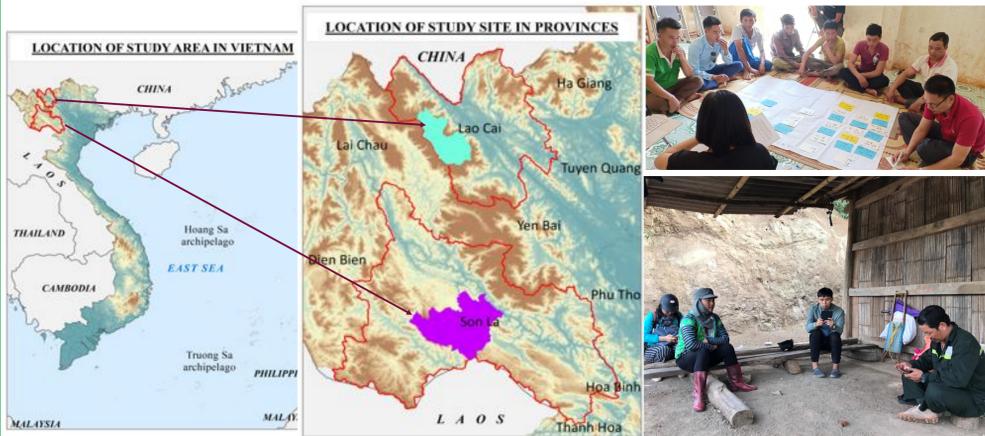
- ★ **On-farm vegetable diversity:**
  - An essential, easy-access food source for dietary diversity and partly income
  - Local farmers: keyholder of diverse vegetables
  - Co-determined by farmers' seed choice, cultural, socio-economic and agro-ecological characteristics
- ★ **Research question: What factors drive on-farm vegetable diversity?**



## APPROACHES AND DATA COLLECTION

**Qualitative data:** Focus Group Discussions (15) and Interviews (31)

**Survey:** 409 households (03 Ethnic minority groups: H'mong, Thai and Dao)



**Study sites: Northwestern Vietnam**

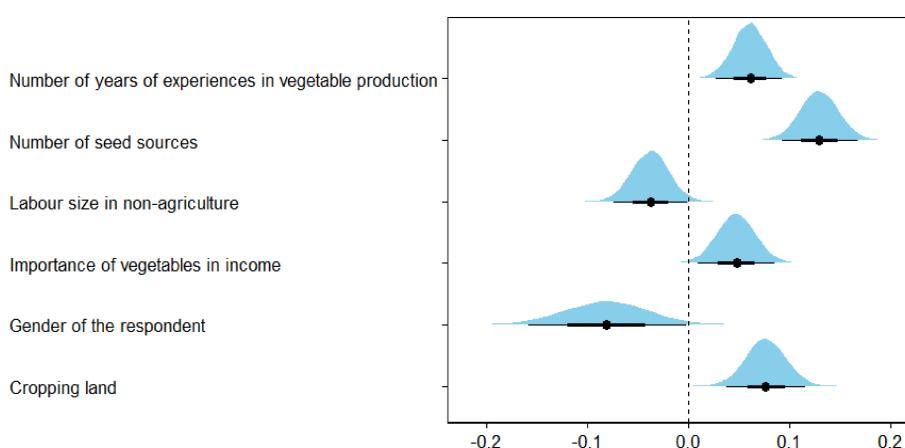
- Mai Son District - Son La Province
- Sa Pa Township - Lao Cai Province

**Data collection time:**

- October 2019 to July 2020

## DATA ANALYSIS

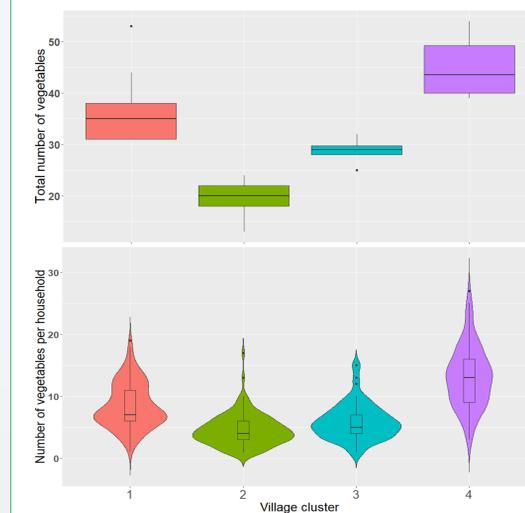
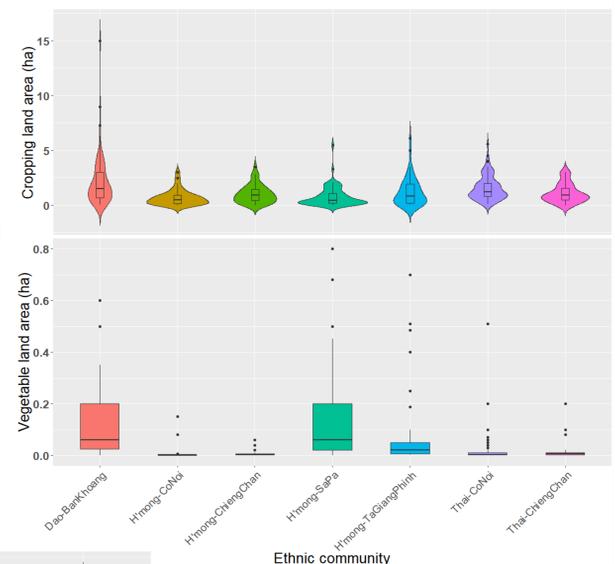
- ◆ **Bayesian generalized regression model** to find the variables driving number of vegetables grown per household
- ◆ **Prinpcial Component and Cluster analyses** to cluster villages sharing a comparable diversity (number) of vegetables
- ◆ **Qualitative data:** complimentary to quantitative findings



Highly reliable variables' coefficients of the generalized regression model are presented

## RESULTS AND DISCUSSIONS

- Total vegetables: 107 vegetables, of which 86 ones are nutrient dense
- Little crop/vegetable land
- Mainly produced for home consumption
- Partly for sale (surplus)



**At the villages**

- Four village clusters were identified
- A range of 19 to 45 vegetables cross village clusters

**At the households:**

- Low diversity of vegetables
- Large variation among the households

**Factors drive number of vegetables grown at households**

**Positive effect:**

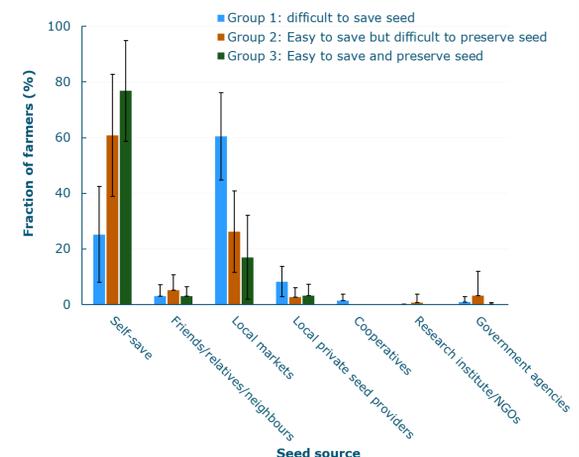
- More experience in vegetable production
- More cropping land
- Access to multiple seed sources

**Negative effect:**

- Men are responsible for vegetable production
- More labour participated in non-agricultural activities

**Contribution of seed sources to vegetable diversity**

- **Decision of saving seed:** ease of saving seed
- **Local markets:** vegetables difficult to save seed
- **Multiple seed sources** are needed to maintain the diversity of vegetables



## CONCLUSIONS

- An overwhelming vegetable diversity at the regional level comes from the variation in vegetable portfolios of the households
- **At the households:** Large crop land, access to multiple seed sources, and more experience in vegetable production support
- A **diversity of seed sources** are needed to support/maintain the diversity of vegetables

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