

## Characterization of Practices among Pig Smallholders in Cambodia and Implications for Disease Risk

**Authors :** Phalla Miech, William Leung, Ty Chhay, Sina Vor, Arata Hidano

**Abstract :** Smallholder pig farms (SPFs) are prevalent in Cambodia but are vulnerable to disease impacts, as evidenced by the recent incursion of African swine fever into the region. As part of the 'PigFluCam+' project, we sought to provide an updated picture of pig husbandry and biosecurity practices among SPFs in south-central Cambodia. A multi-stage sampling design was adopted to select study districts and villages within four provinces: Phnom Penh, Kandal, Takeo, and Kampong Speu. Structured interviews were conducted between October 2020 - May 2021 among all consenting households keeping pigs in 16 target villages. Recruited SPFs (n=176) kept 6.8 pigs on average (s.d.=7.7), with most (88%) keeping cross-bred varieties of sows (77%), growers/finishers (39%), piglets/weaners (22%), and few keeping boars (5%). Chickens (83%) and waterfowl (56%) were commonly raised and could usually contact pigs directly (79%). Pigs were the primary source of household income for 28% of participants. While pigs tended to be housed individually (40%) or in groups (33%), 13% kept pigs free-ranging/tethered. Pigs were commonly fed agricultural by-products (80%), commercial feed (60%), and, notably, household waste (59%). Under half of SPFs vaccinated their pigs (e.g., against classical swine fever, Aujeszky's, and pasteurellosis, although the target disease was often unknown). Among 20 SPFs who experienced pig morbidities/mortalities within the past 6 months, only 3 (15%) reported to animal health workers, and disease etiology was rarely known. Common biosecurity measures included nets covering pig pens (62%) and restricting access to the site/pens (46%). Boot dips (0.6%) and PPE (1.2%) were rarely used. Pig smallholdings remain an important contributor to rural livelihoods. Current practices and biosecurity challenges increase risk pathways for a range of disease threats of both local and global concern. Ethnographic studies are needed to better understand local determinants and develop context-appropriate strategies.

**Keywords :** smallholder production, swine, biosecurity practices, Cambodia, African swine fever

**Conference Title :** ICTASP 2023 : International Conference on Tropical Animal Science and Production

**Conference Location :** Vancouver, Canada

**Conference Dates :** May 22-23, 2023