Beyond milk collection:

Can Indonesian dairy cooperatives lead the recording transition?

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Introduction

Objective

Assess cooperatives' capacity to enhance farmers' record-keeping, identify their roles, and the challenges encountered.

Strategic position of dairy cooperatives

Dairy cooperatives in Indonesia hold a strategic institutional position with smallholder dairy farms due to their intensive interaction with farmers.

Role of record-keeping

Recording is an important instrument in a breeding program, farm evaluation, decision making, etc.

Current practice gap

Method

The study involved five dairy cooperatives located in Bandung, Bogor, Boyolali, and Malang.

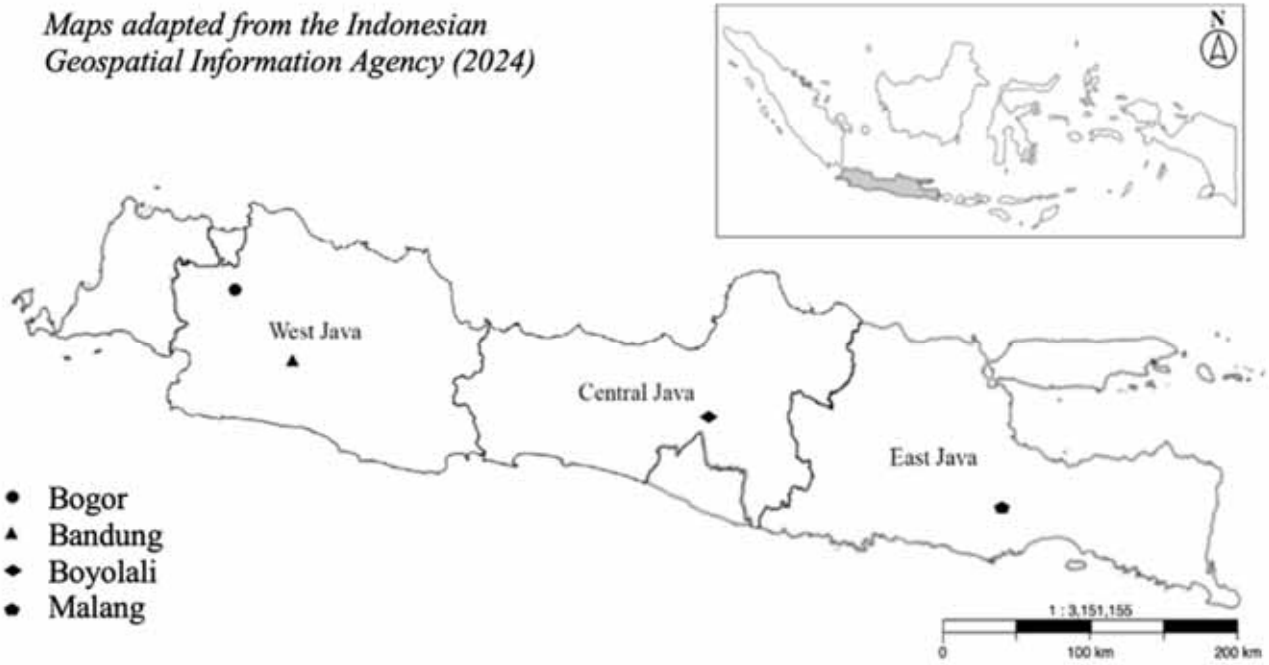


Figure 1. Location of the study area

Data Collection

- 80 farmers (survey)
- 10 farmers (observation)
- 10 stakeholders (interview)

Stakeholders:
Dairy cooperatives, milk processors, farmers' association, government, knowledge institutions

Data Analysis

- Quantitative data using SPSS
- Qualitative data were coded using NVIVO 12
- A power interest matrix
- Fuzzy logic

Results

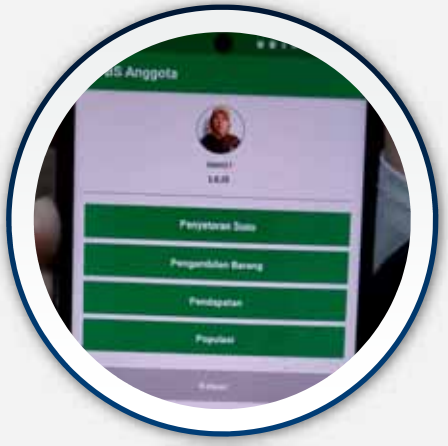
Data & record-keeping services

- Cooperatives facilitate record-keeping for farmers, both digitally and manually
- Two cooperatives (2/5), provide digital record-keeping using internal system database and mobile app
- Data collected includes animal ID, health records, **milk quantity sales**, AI schedules, and pregnancy test results
- Current record-keeping practices are transaction-focused

Technical Support

- Cooperatives assist with artificial insemination (AI) scheduling
- Health monitoring and treatment history are tracked through the cooperative
- Pregnancy test result is managed with cooperative involvement

Record-keeping practices and tools supported by the dairy cooperatives to the farmers



Results

Power

4.13 / 5

Ability to influence record-keeping practices

Interest

4.36 / 5

Motivation to support recording systems

Salience

4.27 / 5

Importance as a stakeholder actor

Cooperatives occupy the **KEY PLAYERS** quadrant in power-interest matrix

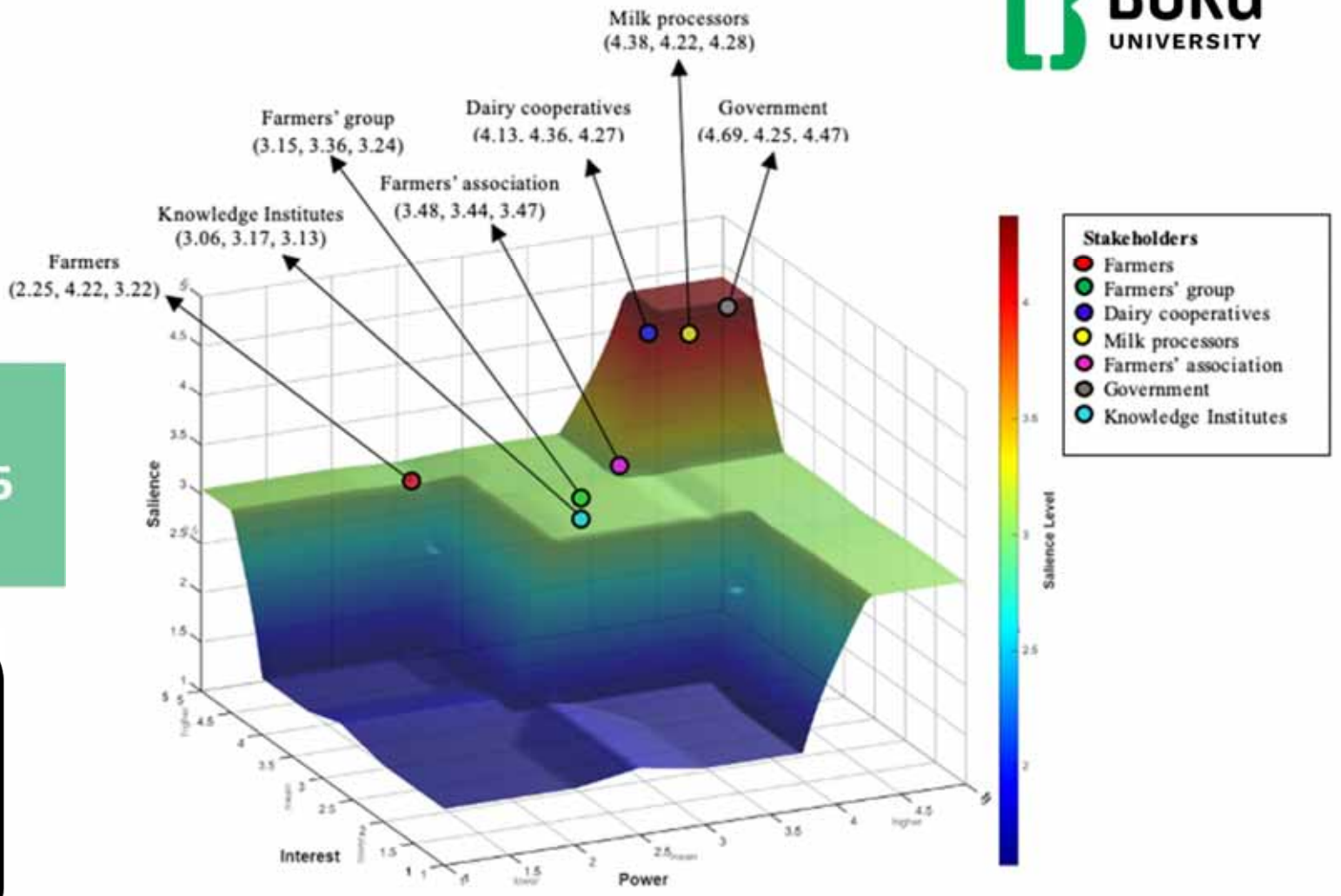


Fig. 2. Fuzzy logic decision surface for relationship of power, interest, salience

Challenges Identified

TECHNICAL CAPACITY CONSTRAINTS

- Limited staff expertise in livestock data management
- Literacy gaps among smallholder farmers
- Insufficient training infrastructure for record-keeping practices

RESOURCE CONSTRAINTS

- Limited financial resources
- Under-resourced data collection and management units
- Competing operational priorities within cooperatives

Conclusions

Dairy cooperatives hold the key to transforming dairy record-keeping practices in Indonesia:

- Serve as the primary point of contact between farmers and other dairy chain stakeholders
- Actively involved in data collection
- **KEY PLAYERS** >> High power (4.13) and interest (4.36) in supporting farmers in record-keeping
- Two cooperatives have digital systems, showing feasibility of the transition

Way forward

Encourage continuous learning

Technical capacity building in livestock data management

Reorienting record-keeping function

Reorienting record-keeping function: from transactional to farm evaluation and decision making

Provide feedback and resource support

Provide resource support for record-keeping infrastructure

Thank You