The influence of the local social profile on establishing grower and community collaboration

The case of fruit fly area-wide management

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Background

- Foundations of modern biosecurity systems
  - International rules shape domestic rules
  - WTO & IPPC
  - Harmonisation, science-based
- Biosecurity is predominantly techno-centric
Biosecurity rules often assume spatial and social homogeneity.
Fruit Fly Area-Wide Management (FF AWM)

- Synchronised pest management across a geographical area, incl. towns
- Reduces pesticide need
- Industry increasingly need to lead FF AWM
Methods

- Queensland Fruit Fly (Qfly) (*Bactrocera tryoni*)
- Three case studies (Sept 2013 – March 2014)
  - In-depth, semi-structured interviews and focus groups (53 participants)
- Grower survey (Sept – Nov 2015)
  - 98 Growers
Theoretical background

- Literature on social ecological systems, collective action and adaptive co-management
- Collective action social dilemmas:
  - Free riding
  - Opting out
- Applied 8 principles for managing a common resource (Elinor Ostrom, 2004)
  - Trust
  - Fairness
Central Burnett, QLD

- Success story in Qfly endemic region
- Mainly mandarins, some table grapes and mangoes
- Trust relationships with three crop consultants
- Est. 40 growers, most keen to export
- Small towns – voluntary grower levies fund backyard treatments
- Grower contributions dwindling
- Domestic market access success
- Disappointment with international access
Riverina, NSW

- Socially challenged
- Strong past government support
- Citrus industry drives Qfly control since July 2013
- Large, diverse and fragmented horticulture industries
- Traditionally not Qfly endemic
- Large towns – asks residents to purchase inputs and maintain hosts
Young Harden, NSW

- Early days with AWM
- Local government and key cherry growers started Qfly management group in 2012
- Some stonefruit and grape growers
- Medium towns, increasing hobby farms
- Asks residents to purchase inputs and maintain hosts
Clearly defined boundaries (principle 1)

Geographical boundaries
- Well demarcated in all case studies

Participants
- Clear in Central Burnett – homogeneous industry and towns treatments funded
- Challenging in Riverina and Young Harden
Congruence between appropriation and provision (principle 2)

Amongst growers
- Market access uncertainty makes spread of benefits amongst growers unclear

Amongst growers and town residents
- Central Burnett – growers’ town treatment contributions based on their hectares of production
Collective choice arrangements (principle 3)

Growers
- Central Burnett – Close relationship between growers and crop consultants
- Riverina – Large, fragmented horticulture industries make communication and legitimacy difficult
- Young Harden – Strong informal bonds between growers

Town residents
- Town residents in Central Burnett get ‘free service’
Monitoring (principle 4)

Biophysical

- All case studies monitor Qfly numbers through traps

Cooperation

- Central Burnet – Regular crop consultant farm visits
- Riverina – Requesting packhouses to require growers to provide proof of Qfly management
Social enablers

- Homogenous local grower population
- High social capital
- Existing social mechanisms for monitoring
- Favourable ratio between supportive growers and risk contributors with little incentive to manage the pest
Ways forward

- **Adaptive co-management** – Learn and adjust
- ‘**Smart regulation**’ – Maintain trust and reduce transaction cost
- **Training to build local capabilities** – incl. negotiation, facilitation and conflict resolution
Conclusion

- The social profile influences the transaction cost - Consider during planning and resourcing
- Approaches need to be locally tailored, but regions can learn from each other
Questions?

Any questions?

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