

The Role of Knowledge Translation and Transfer (KTT) in the Development, Commercialization, Acceptance & Adoption of Agri-innovations

CCOVI Lecture Series
March 22, 2023



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Outline

- Overview of Work
- Intro to Knowledge Translation & Transfer (KTT)
- BMPs & KTT

Overview of Work

Research

- Study social-ecological dynamics of agricultural innovation systems
- Build AgKTT framework
- Develop effective AgKTT strategies and tools

Science Analyses

- Research
 - Position agri-food research for impact
- Science Communication
 - Translate research into compelling narratives
- Policy
 - Support evidence-based decision-making

...driving the development, commercialization, acceptance, adoption of agri-innovations

Knowledge Translation & Transfer (KTT)

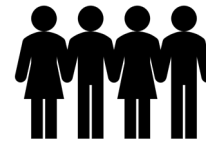
New Challenges for Agriculture



emerging
social-
ecological
issues



advances in
science &
technology



diverse
stakeholders



knowledge
to action gap

Call for...

New Approaches

...for translating, synthesizing, curating,
communicating and sharing research and
agri-innovations that drive and accelerate
development, commercialization, acceptance
and adoption

Knowledge Translation & Transfer (KTT)

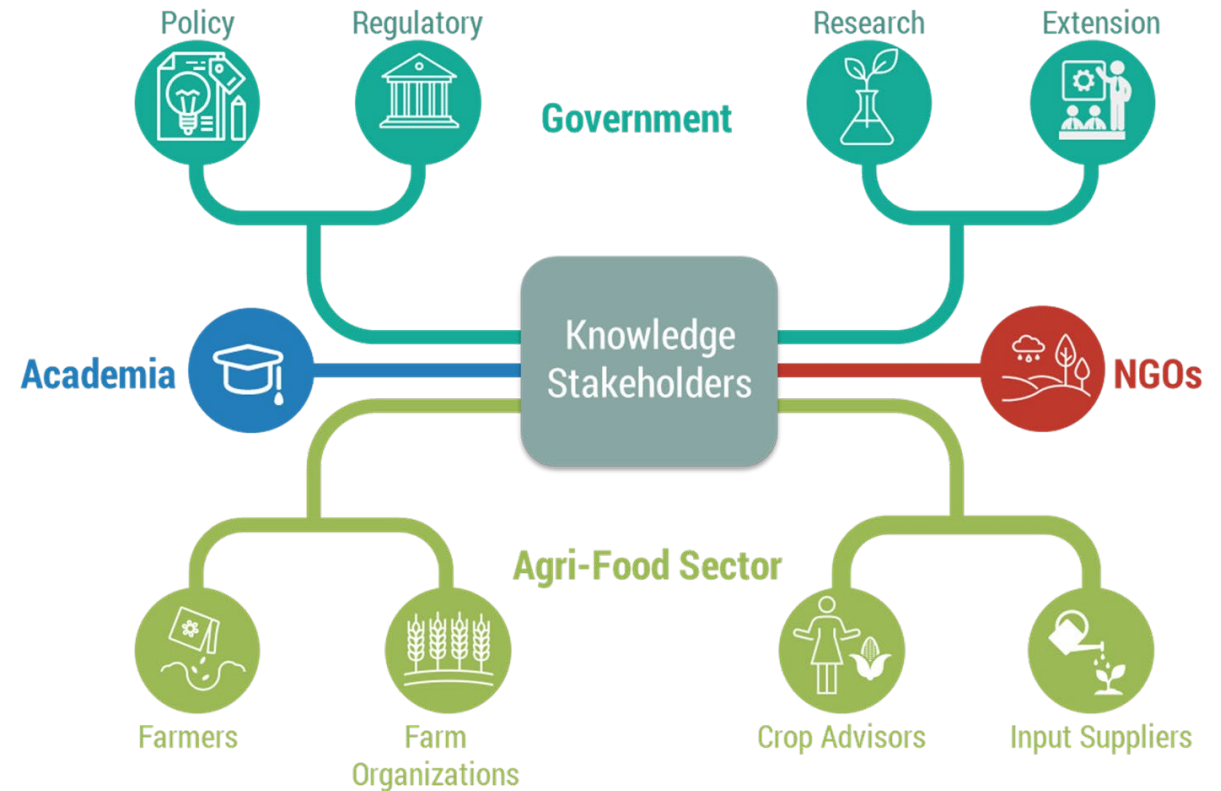
“transformation of
knowledge into use through
synthesis, exchange,
dissemination, dialogue,
collaboration and brokering
among researchers and
research users”

KTT is about...

getting the **right information** to the
right people in the **right format** at the **right time**

KTT is about...

creating a network
of dynamic
interactions among
knowledge
stakeholders within
an agriculture
innovation system



Unique aspects of AgKTT

- agriculture - social-ecological system
- knowledge contested, uncertain
- existing KTT models, tools developed for other sectors
- effectiveness not tested or validated for agriculture applications
- lack of evidence of what works for agriculture KTT

AgKTT Framework – Contexts of KTT

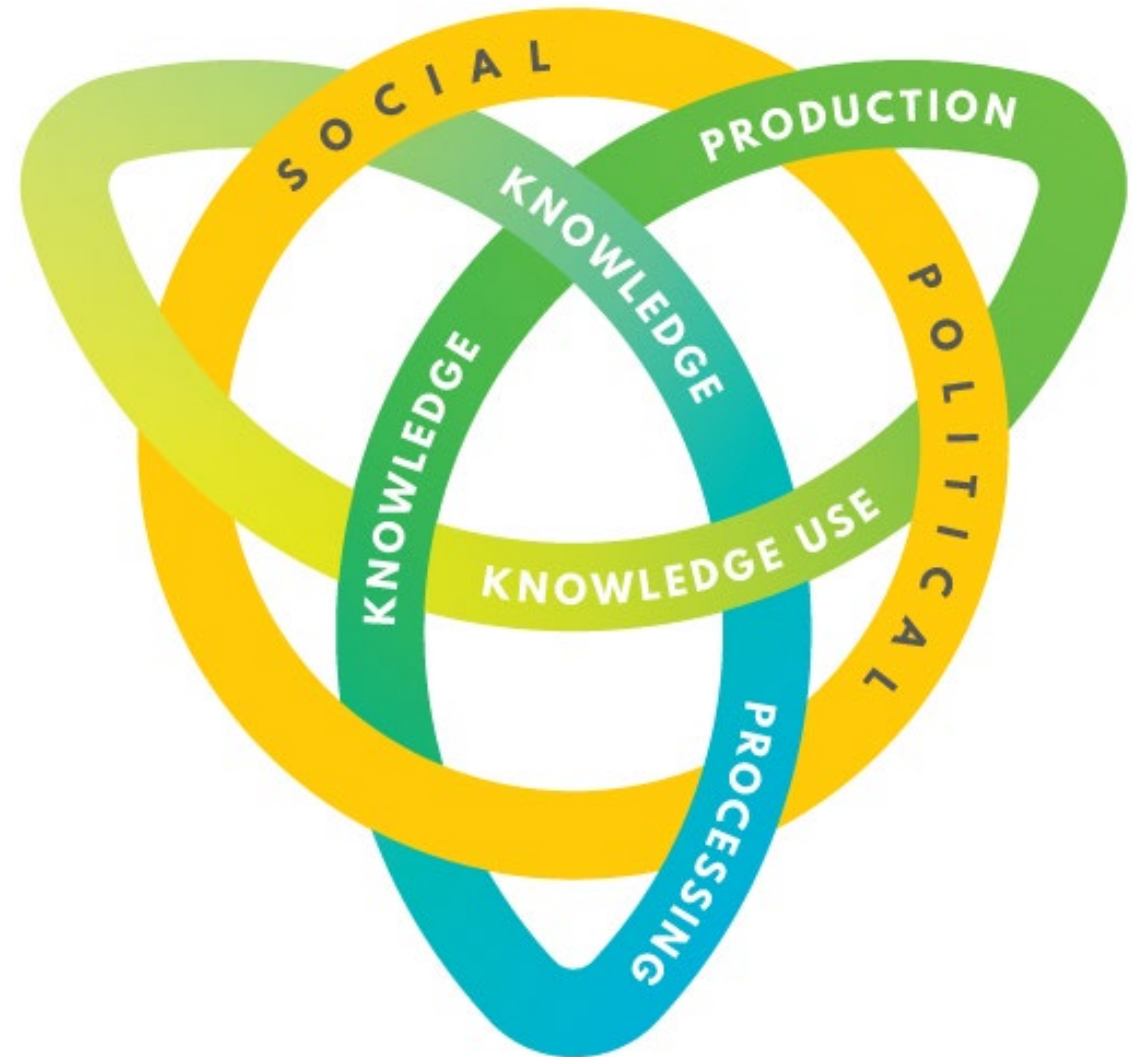
Knowledge use

Knowledge production

Knowledge processing

Social-political

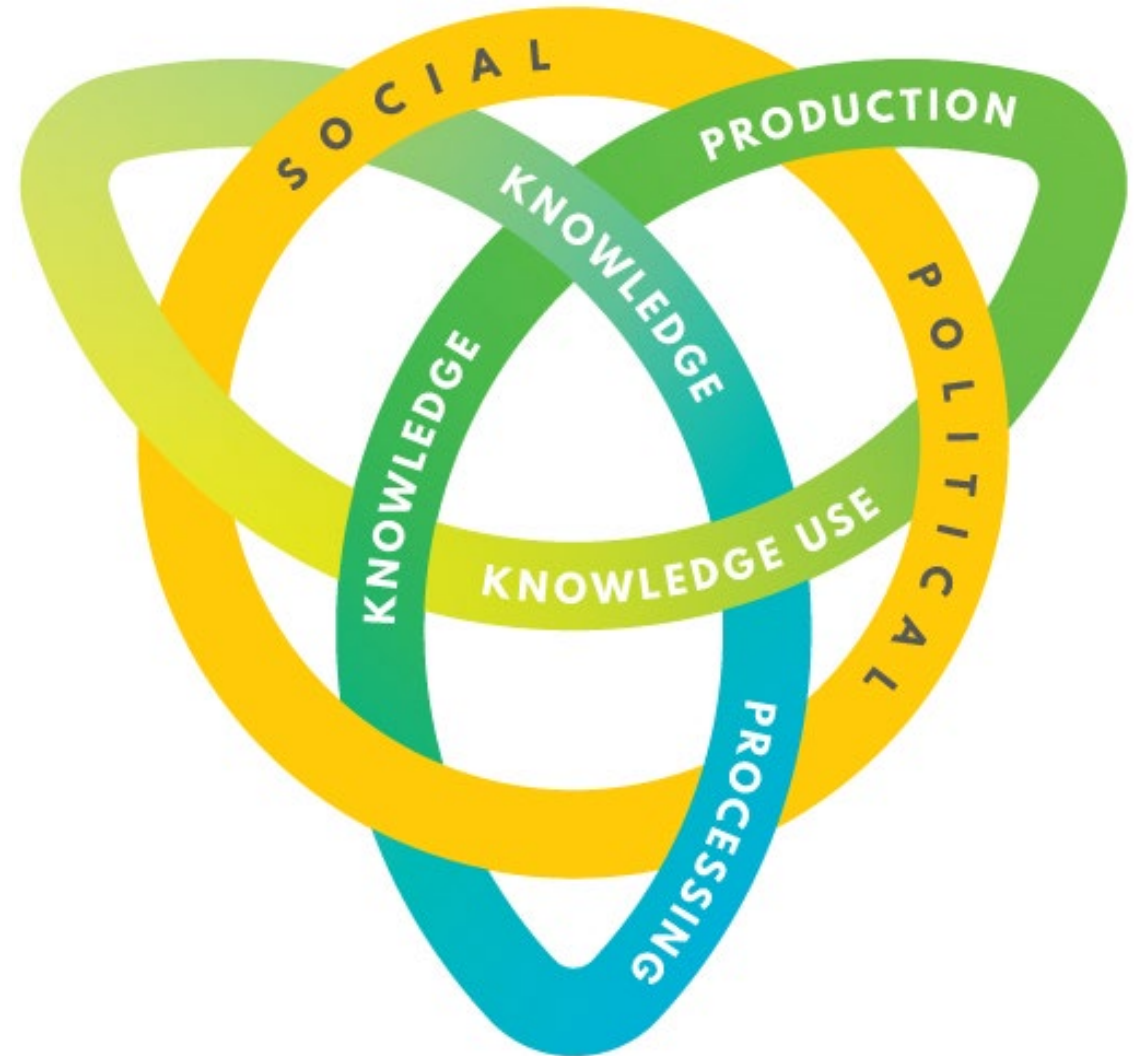
Lemay & McDonald, 2022.



AgKTT Framework – Contexts of KTT

Knowledge use

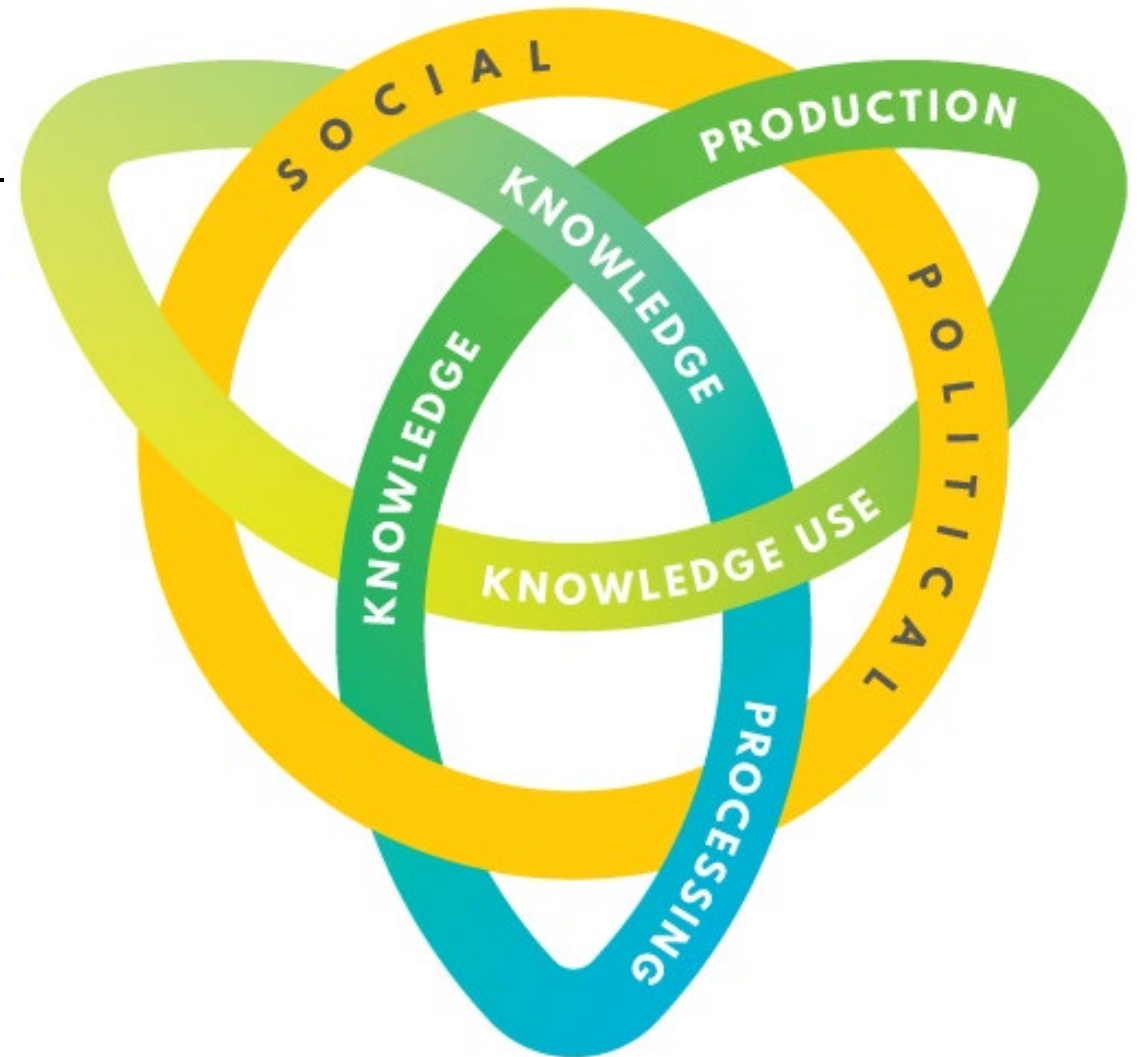
- Diverse knowledge users
- Improve productivity, efficiency, sustainability
- Inform/guide policy, funding, investment decisions, industry advocacy strategies
- Conceptual & instrumental uses
- Change the way people think before changing the way they act



AgKTT Framework – Contexts of KTT

Knowledge production

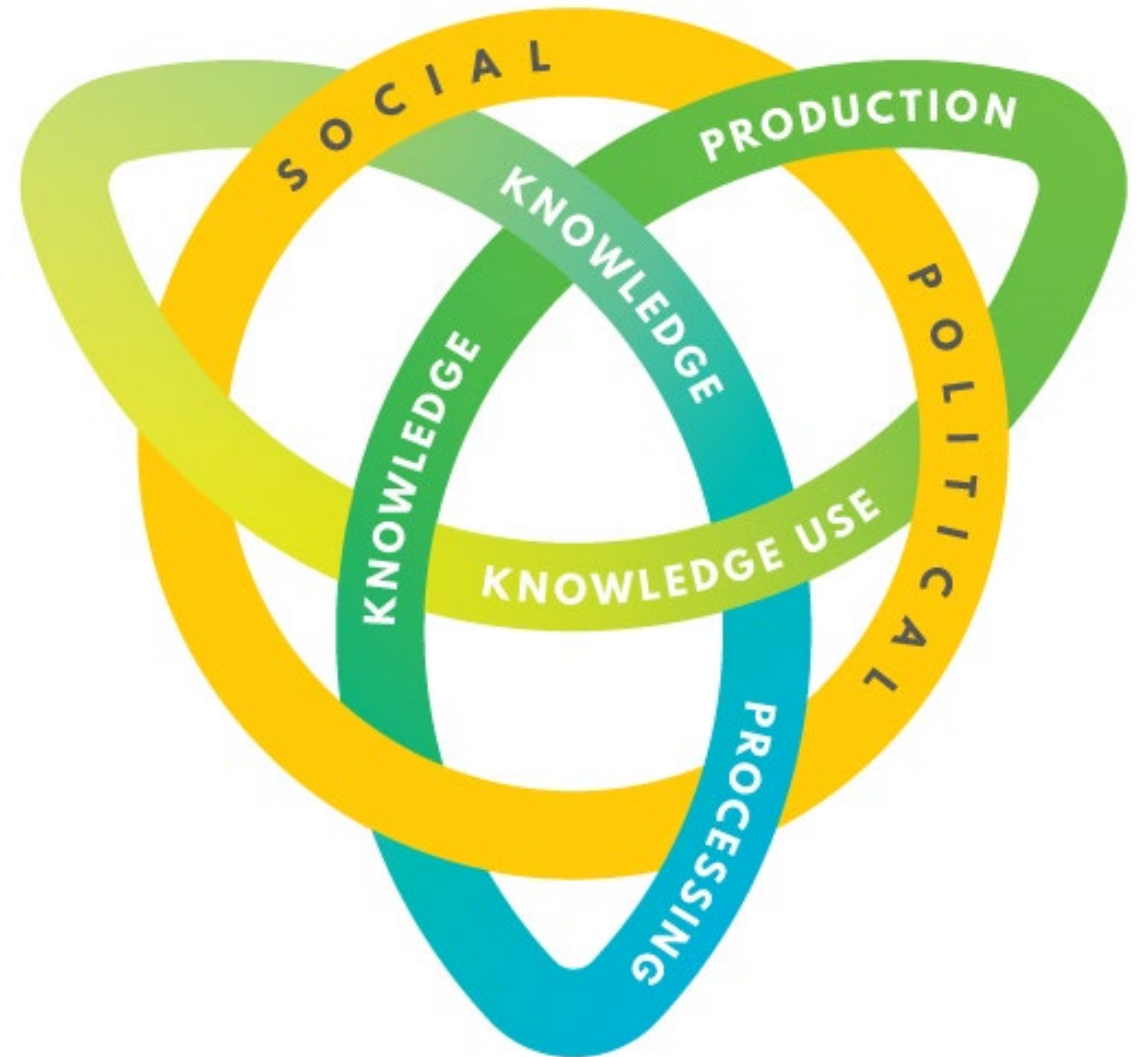
- Research & science – cornerstone of agri-food sector
- Academic/government scientists – knowledge producers
- Ag research – collaborative, driven by stakeholder needs
- Integrated within broader research infrastructure



AgKTT Framework – Contexts of KTT

Knowledge processing

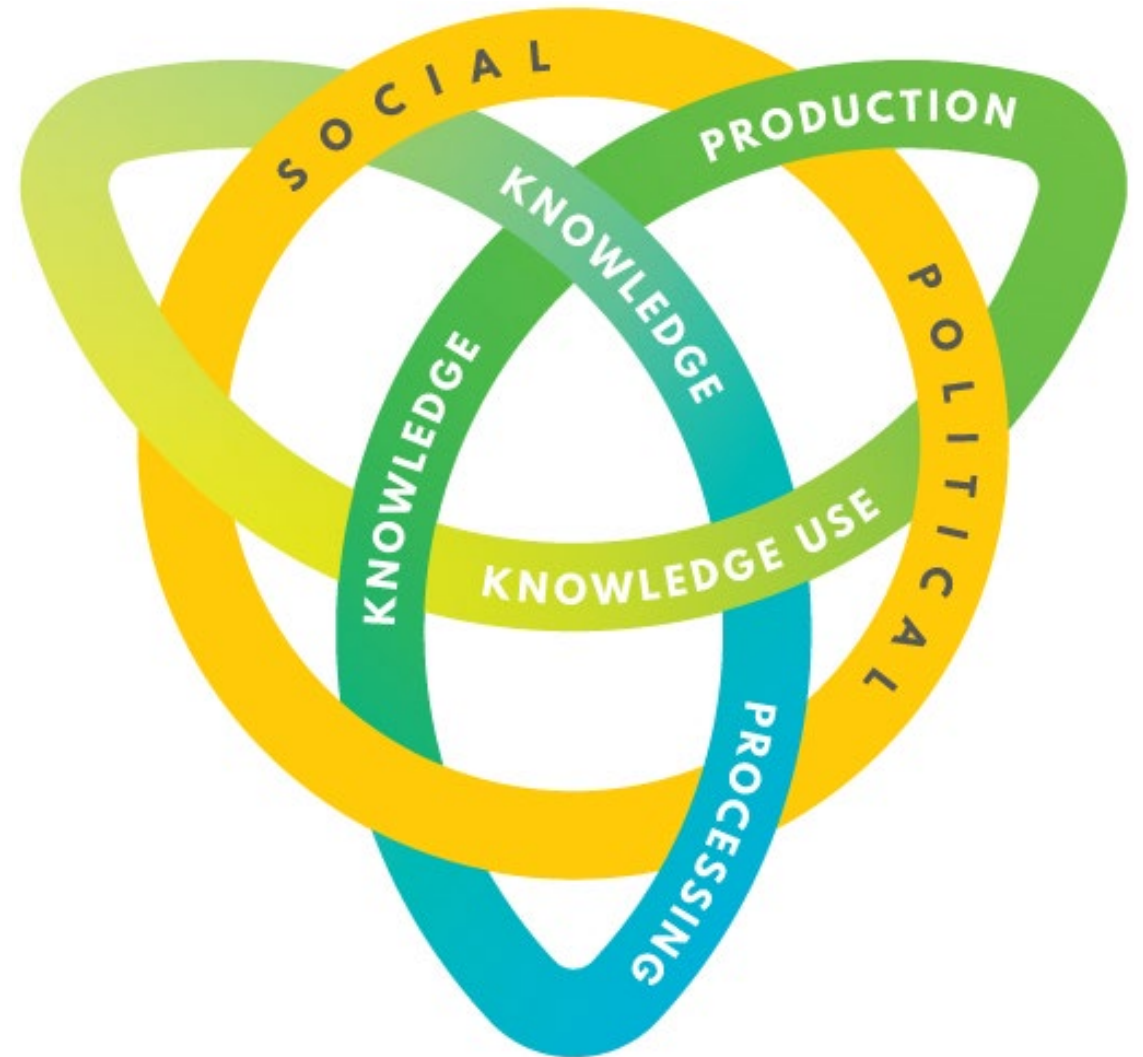
- Value-adding processes – diverse knowledge users
-
- Adapting and integrating new knowledge with existing knowledge/practices
- Role of intermediaries
- Driven by knowledge network of diverse knowledge stakeholders – shared vision



AgKTT Framework – Contexts of KTT

Social-political

- Social – relationships, trust, leadership
- Policy – government priorities, rules, regulations, programs to achieve goals
- Governance – broader role of non-governmental stakeholders, institutions, organizations; formal/informal procedures, norms
- Supported by stable policy and governance mandates



Mobilizing Knowledge for the adoption of best management practices (BMPs) in Ontario's Horticulture Sector

BMPs & KTT

- BMPs – sustainable practice, technology, system
- Inconsistent adoption
- BMPs – research-based agri-innovations
- Dynamics of KTT in adoption - unknown

Project Objectives

- Determine extent of BMP adoption in horticulture
- Profile farmers' knowledge seeking behaviour
- Profile researchers' knowledge sharing behaviour
- Identify alignments and gaps between farmers and researchers
- Recommend policy actions and KTT best practices

Project Design

Knowledge Synthesis

Factors that hinder and enable KTT in adoption of BMPs in horticulture

Surveys

Farmers, Intermediaries, Researchers
Online: January – March 2022

Case Study

KTT & Adoption of Grape Virus Integrate
Pest Management
(Kaitlyn Carr, Masters of Sustainability, ESRC)

Results – Knowledge Synthesis

Knowledge use

- Growers' needs drive KTT

Knowledge production

- Uncertainty, risk, complexity hinder KTT

Knowledge processing

- Need various knowledge sources and types
- Essential role of intermediaries
- Communication & collaboration

Social-political

- Trust among stakeholders
- Lack of specialized personnel; support for growers
- Grounded in social learning

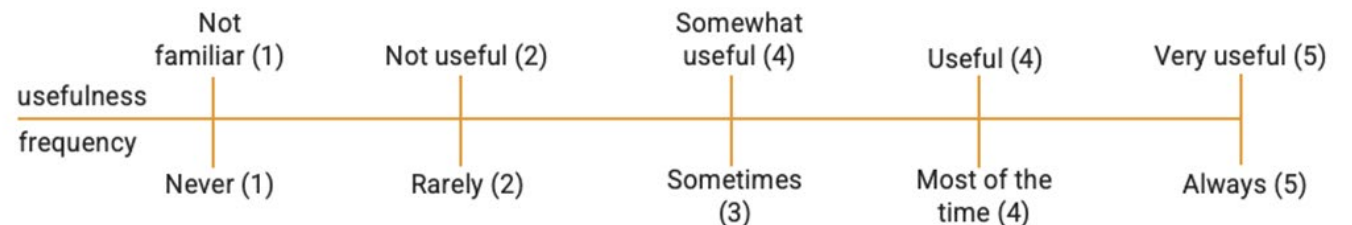


Results Farmers' Survey

Preferred Sources & Types of Information

Sources: organizations & individuals from whom farmers seek information about BMPs

Types: forms & ways information about BMPs are shared and disseminated



Most Frequently Used Sources

Most Frequent

- other farmers (95%)
- scientists (83%)
- OMAFRA specialists (69%)

Least Frequent (never)

- politicians (87%)
- custom applicators (62%)
- government managers, policy makers (54%)



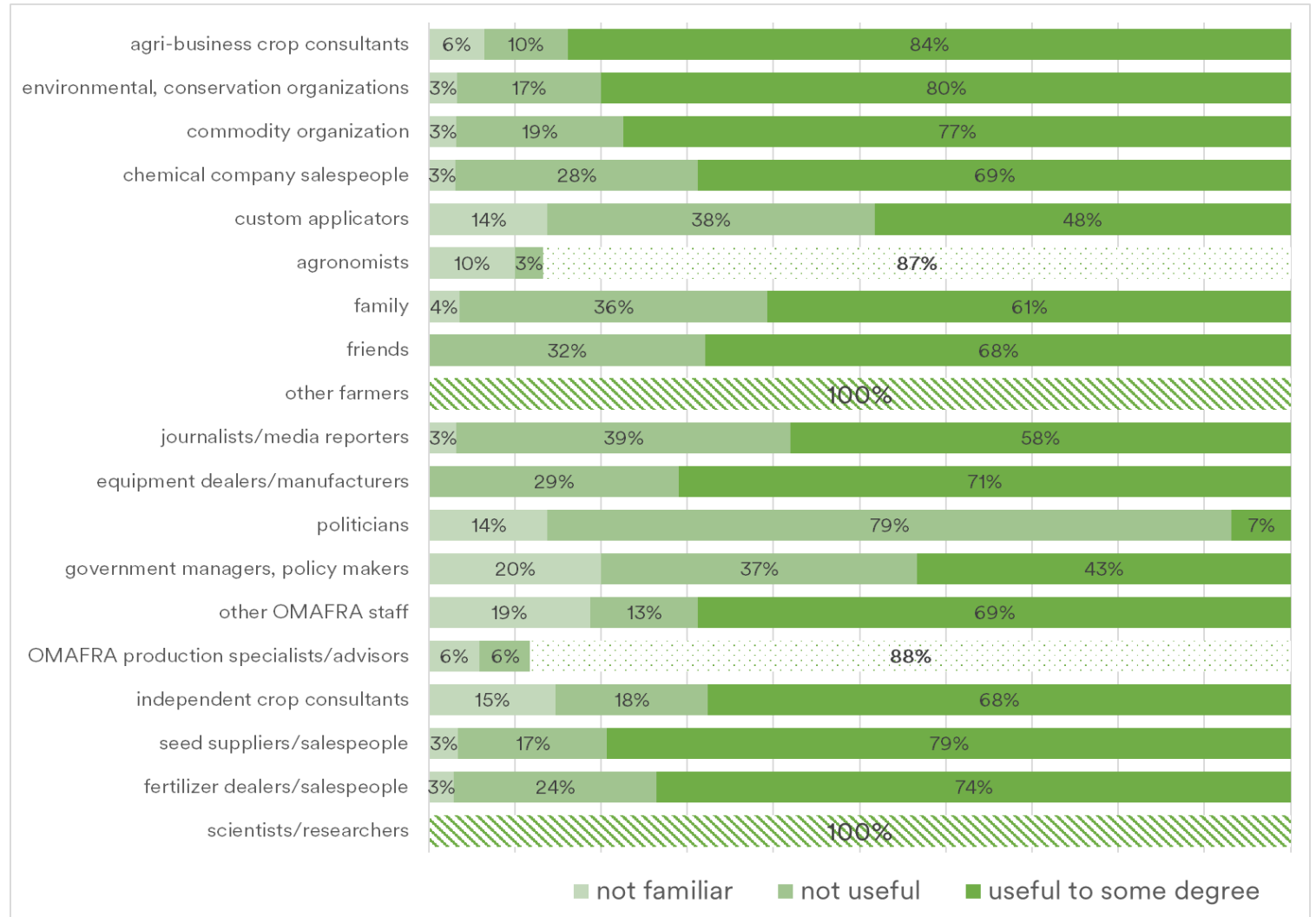
Most Useful Sources

Most Useful

- other farmers (100%)
- scientists (100%)
- OMAFRA specialists (88%)
- agronomists (87%)

Not Useful

- politicians (79%)
- journalists/media reporters (39%)
- custom applicators (38%)



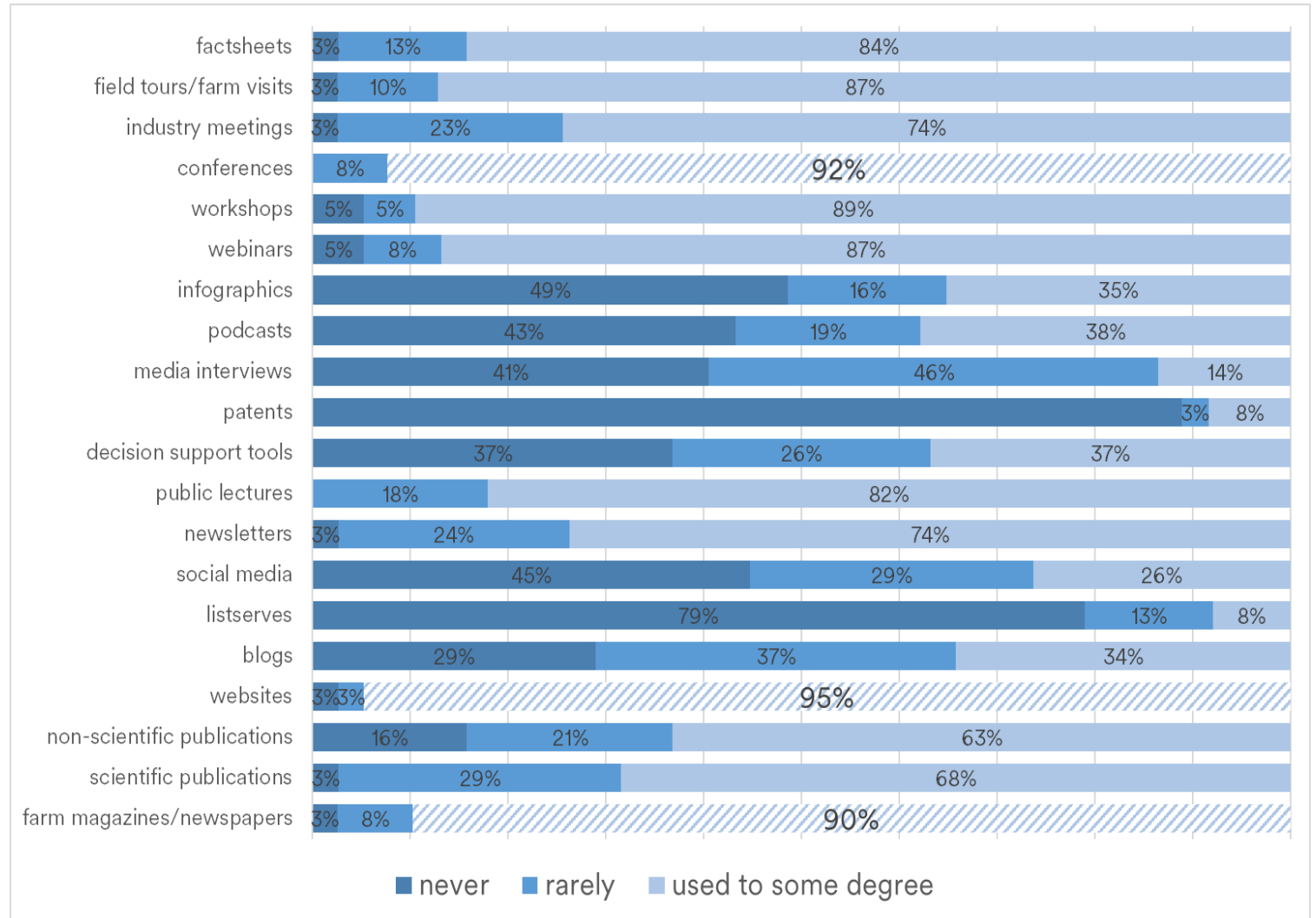
Most Frequently Used Types

Most Frequent

- websites (95%)
- conferences (92%)
- farm media (90%)

Least Frequent (never)

- patents (89%)
- listserves (79%)
- infographics (49%)



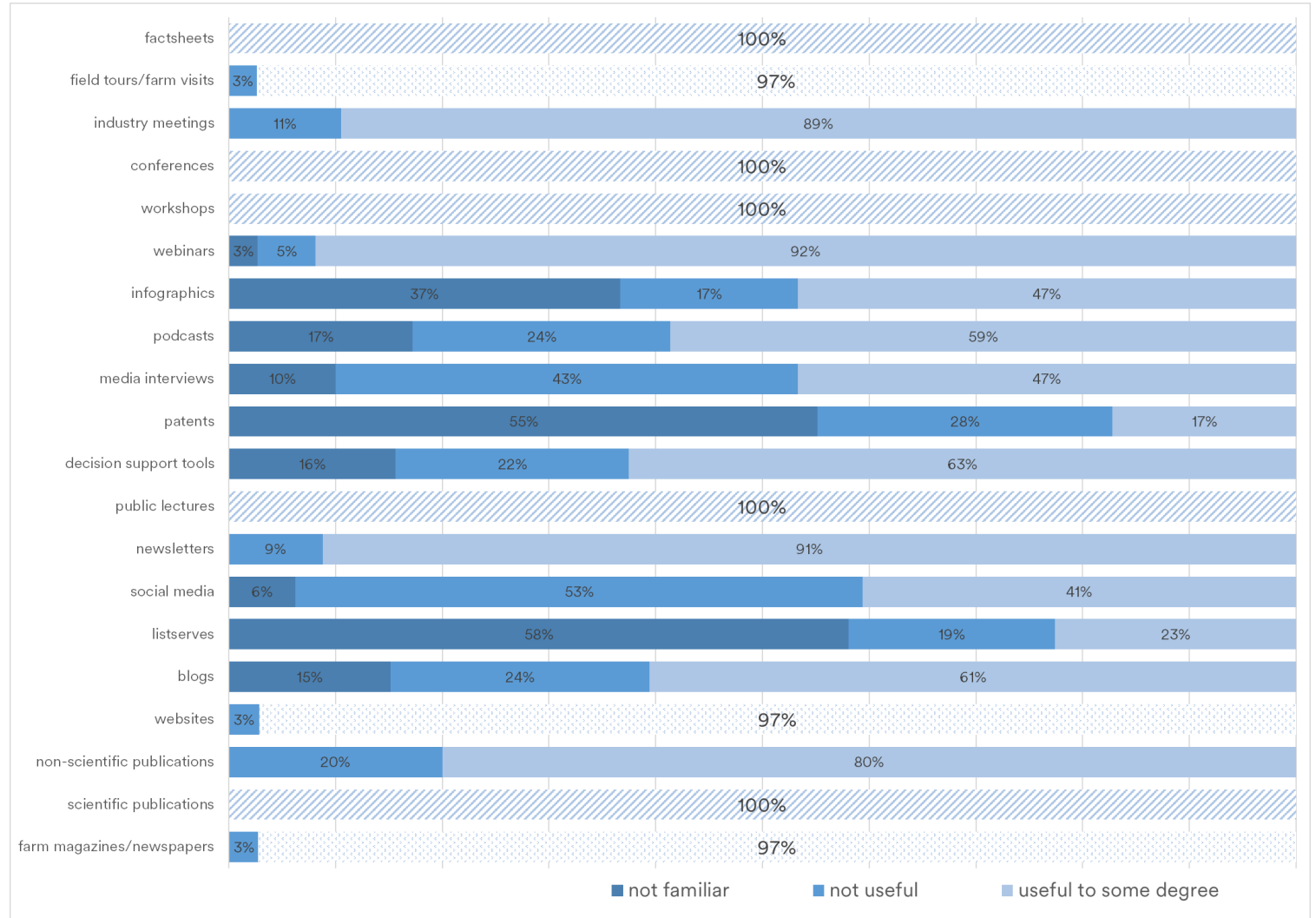
Most Useful Types

Most Useful

- scientific publications
- public lectures
- workshops
- conferences
- factsheets

Not Useful

- social media (53%)
- media interviews (43%)
- patents (28%)



Implications

- Need multiple sources & types
- Most frequent/useful sources & types – guide KTT strategies
- Researchers highly regarded source—not only
- Scientific literature highly regarded type
- Publishing research findings a KTT priority
- Other ‘knowledge processors’ necessary as sources AND to develop value-added types of information
- Other knowledge users may value other sources/types
- Lots to still to learn about AgKTT

Project Team

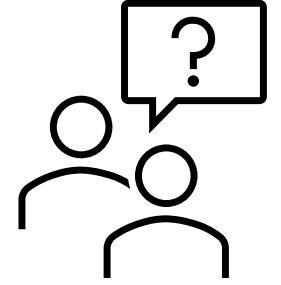
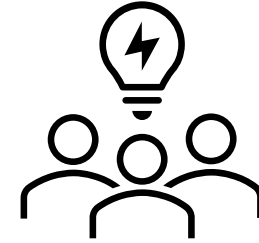
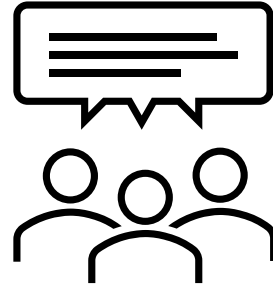
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Thank-you



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