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The state of agroforestry in North America

Penn State **Extension**

Association for Temperate Agroforestry

To promote the wider adoption of agroforestry by landowners in temperate regions of North America

- Established in 1991
  - Voluntary
  - Educational
- North American Agroforestry Conference
- Newsletters
- Website
- Technical and Policy Publications

Canada: Prairie States Shelterbelt Program
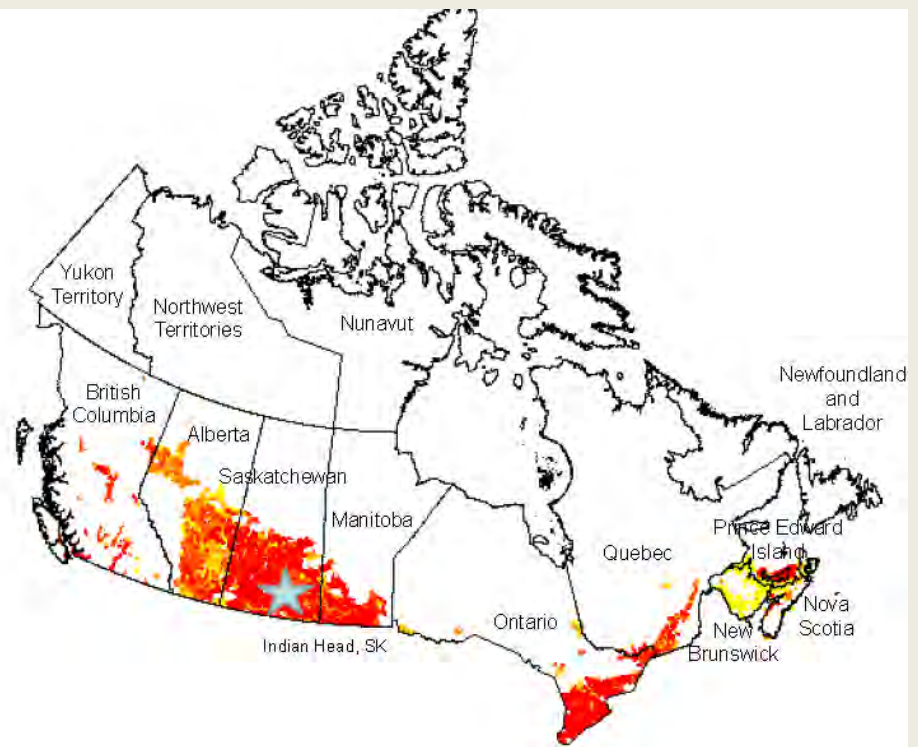
United States: Chesapeake Bay Riparian Buffer Program

600 Million Trees and Growing!

Since 1901
in western Canada:
Protecting soil, air and water
Sequestering CO_2
Increasing biodiversity
Saving energy

For more information:
1-866-766-2284
www.agr.gc.ca/shelterbelt

Trees distributed to farmers through the
PFRA Prairie Shelterbelt Program

Chesapeake Bay Watershed
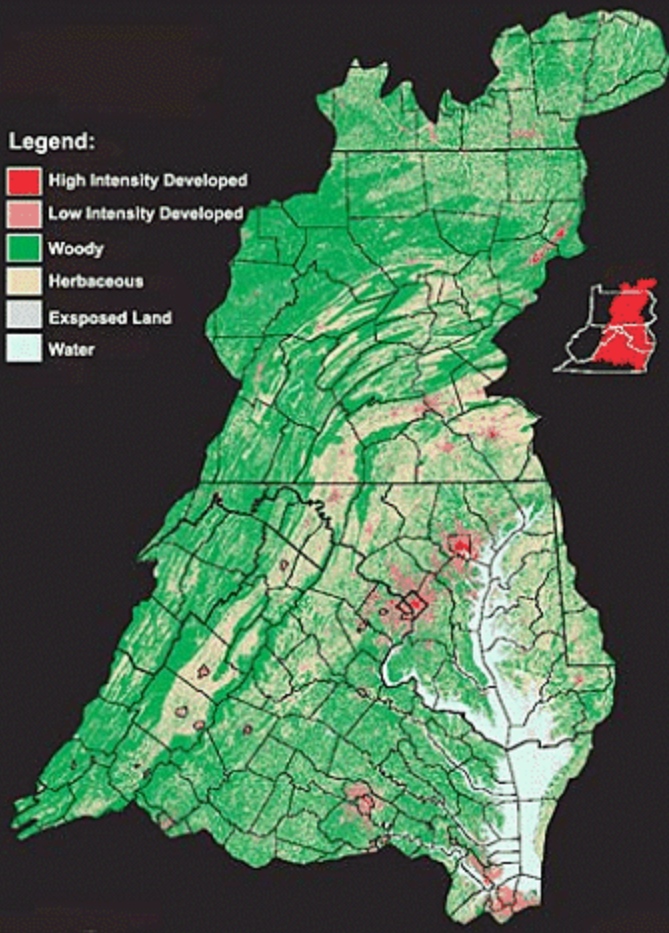
Agroforestry is happening out there!

In United States:
FY2008-2010 - $27 million obligated for "agroforestry"

NRCS Reported Practices

FY 2008, 2009, 2010		
NRCS Conservation Practices	**Applied**	**Number**
Alley Cropping (ha)	230	132
Multi-Story Cropping (ha)	95	49
Riparian Forest Buffer (ha)	**51.978**	**13,036**
Silvopasture Establishment (ha)	574	44
Windbreak/Shelterbelt Establishment (m)	**7,270,499**	**10,867**

Source: Performance Results System (PRS) NRCS Summary of Conservation Practice (Applied and reported practices)

Agroforestry Application and Program Use with the 2008 Farm Bill, by State
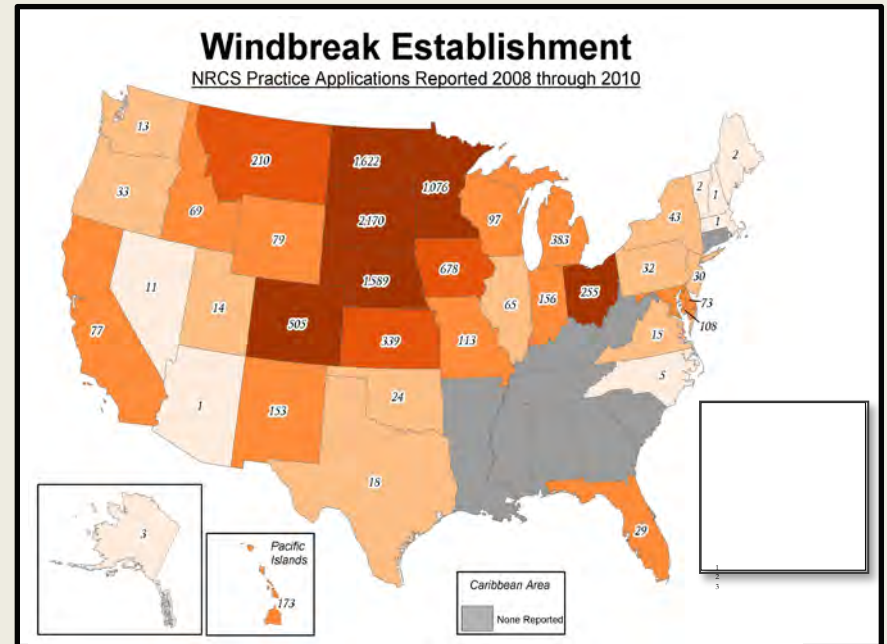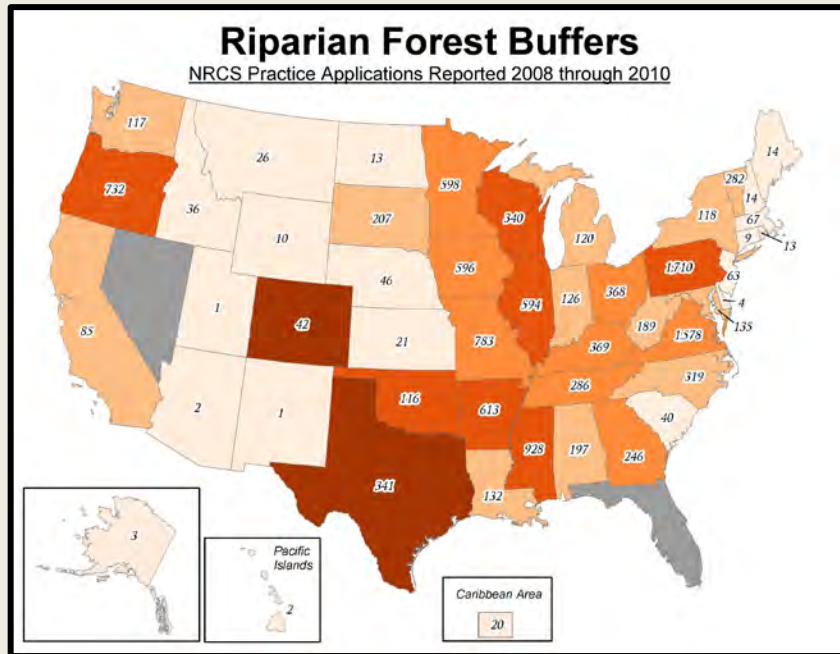
Survey of practitioners in 2011

- Objectives
  - What is the extent of agroforestry
  - What type of program and practices
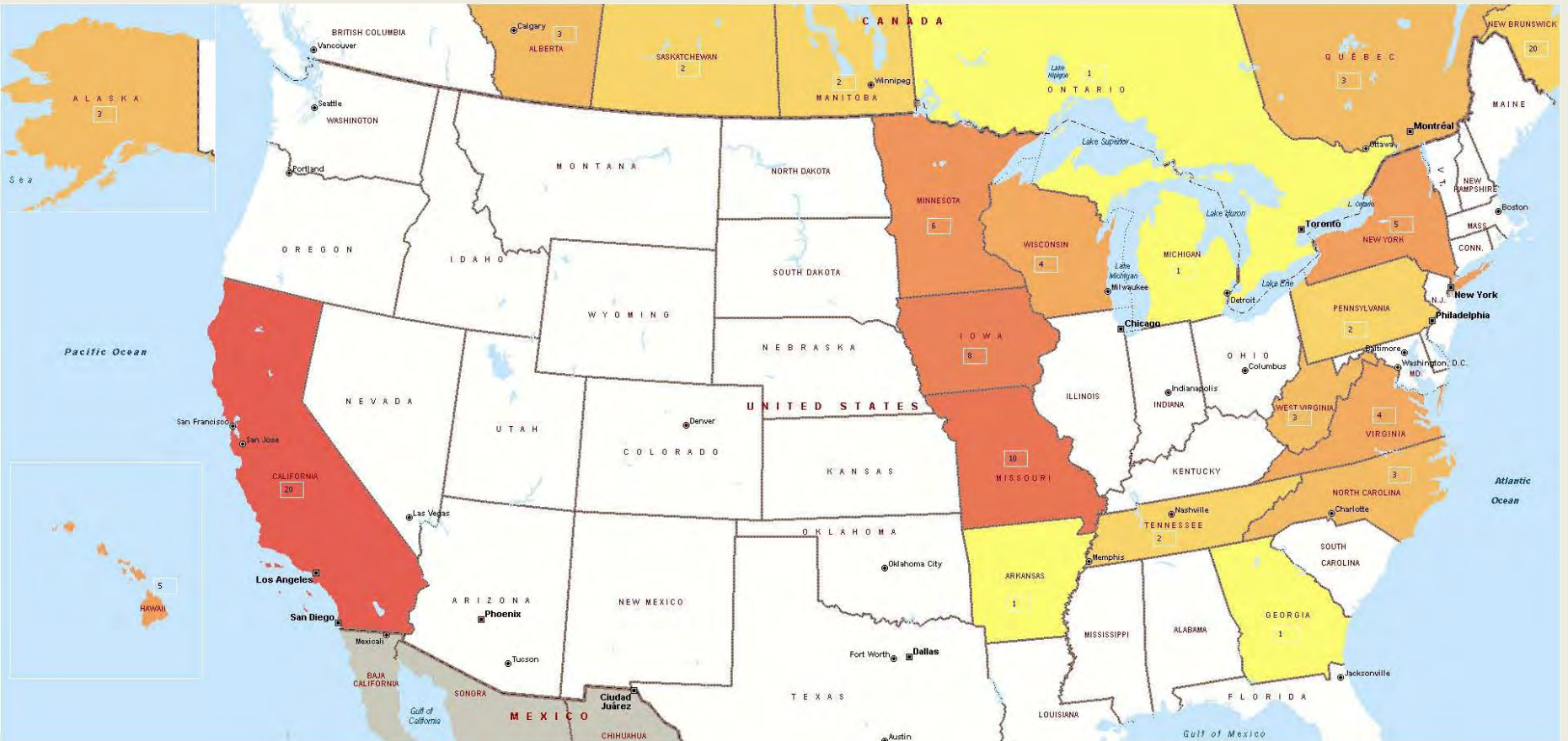 - What can we learn from comparisons across countries, states, provinces and regions?
- Total responses- 67
- USA- 45 (covering 32 states)
- Canada -22 (covering all 10 provinces)

States/provinces that have current program(s)

15 states and 6 provinces

Why no agroforestry program in your state/ province?

Legend:
- ■ (blue) Limited resources (personnel, funding)/ No dedicated programs or extension agents for agroforestry
- ■ (red) Low profile of agroforestry/ Not much scope/ Not critical in land use contribution
- ■ (green) Lack of awareness or interest in agroforestry

Pie chart values: 53%, 33%, 14%
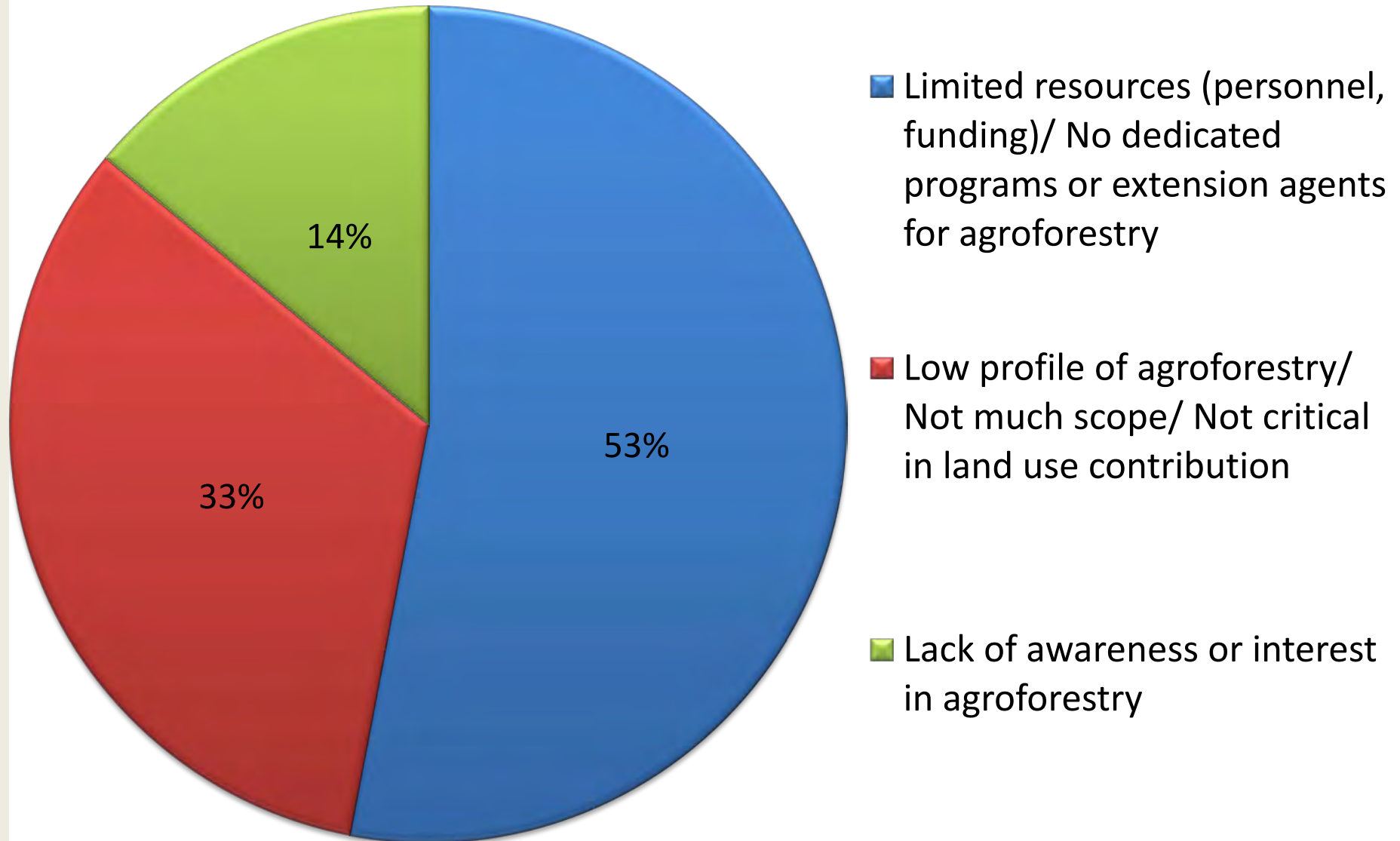
Most common practices
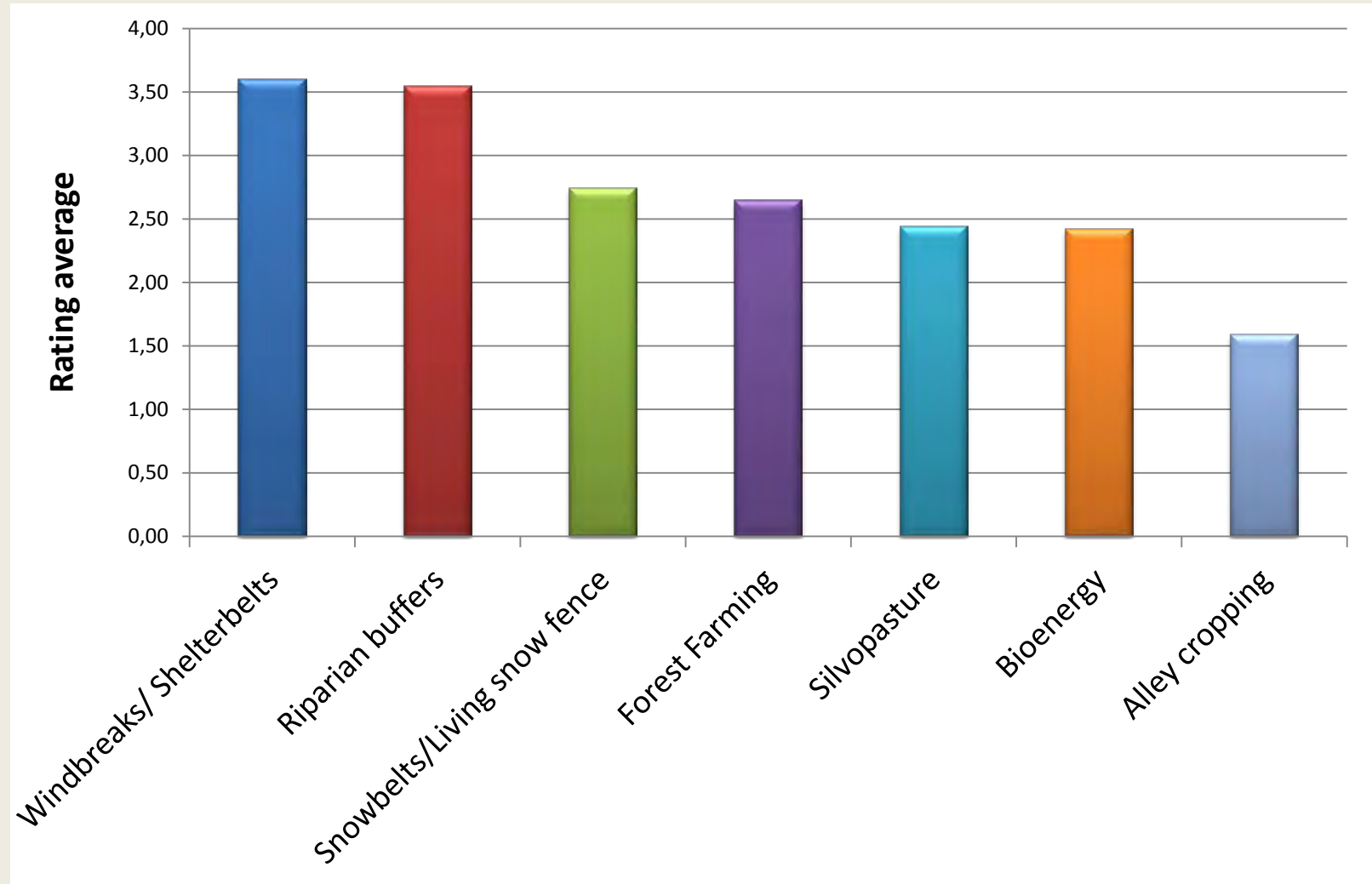
Three most common agroforestry practices:
Windbreaks/shelterbelts, riparian buffers, snowbelts

Success of Programs

- One in ten said there programs were not successful
- In US 25% said very or fairly successful
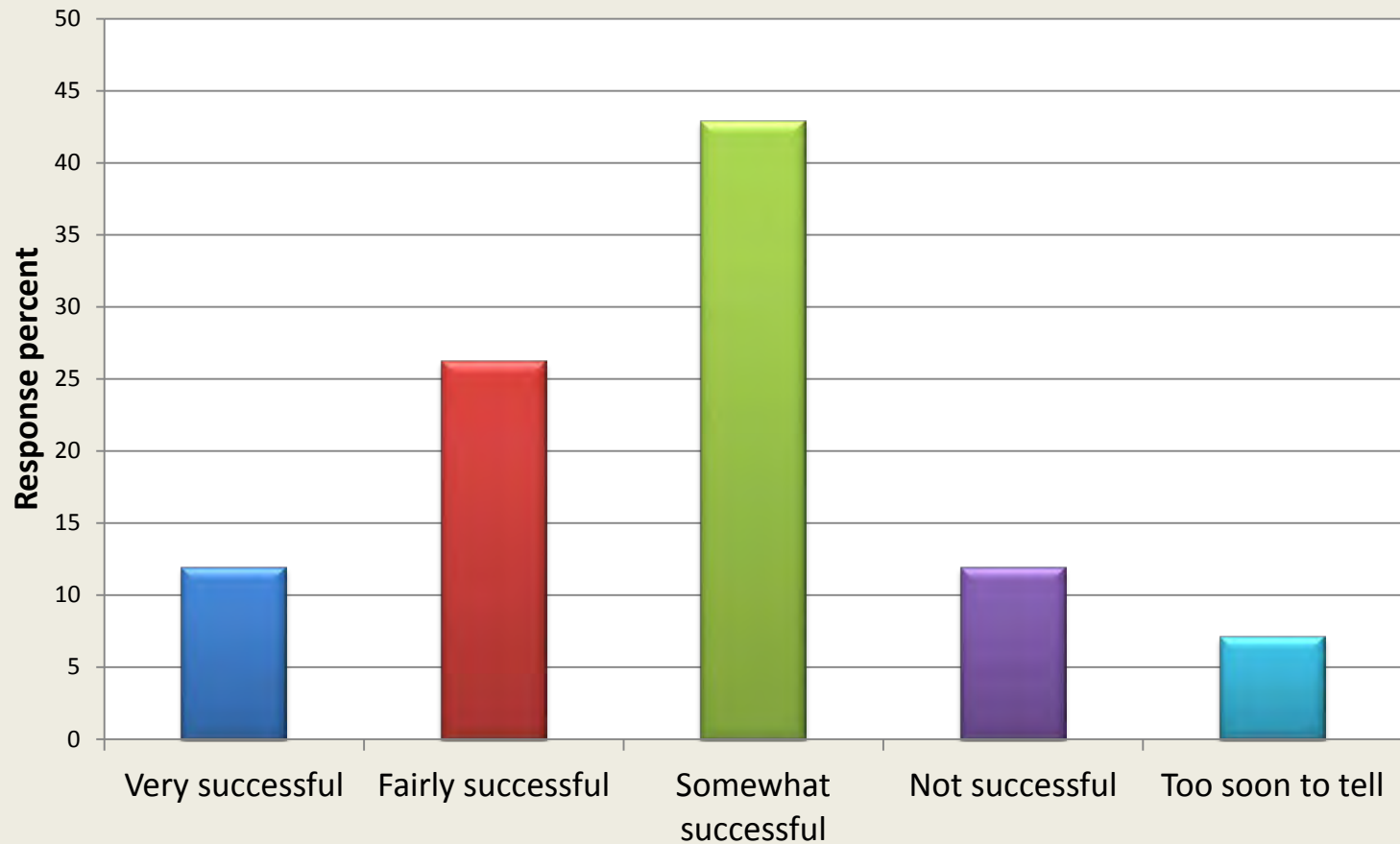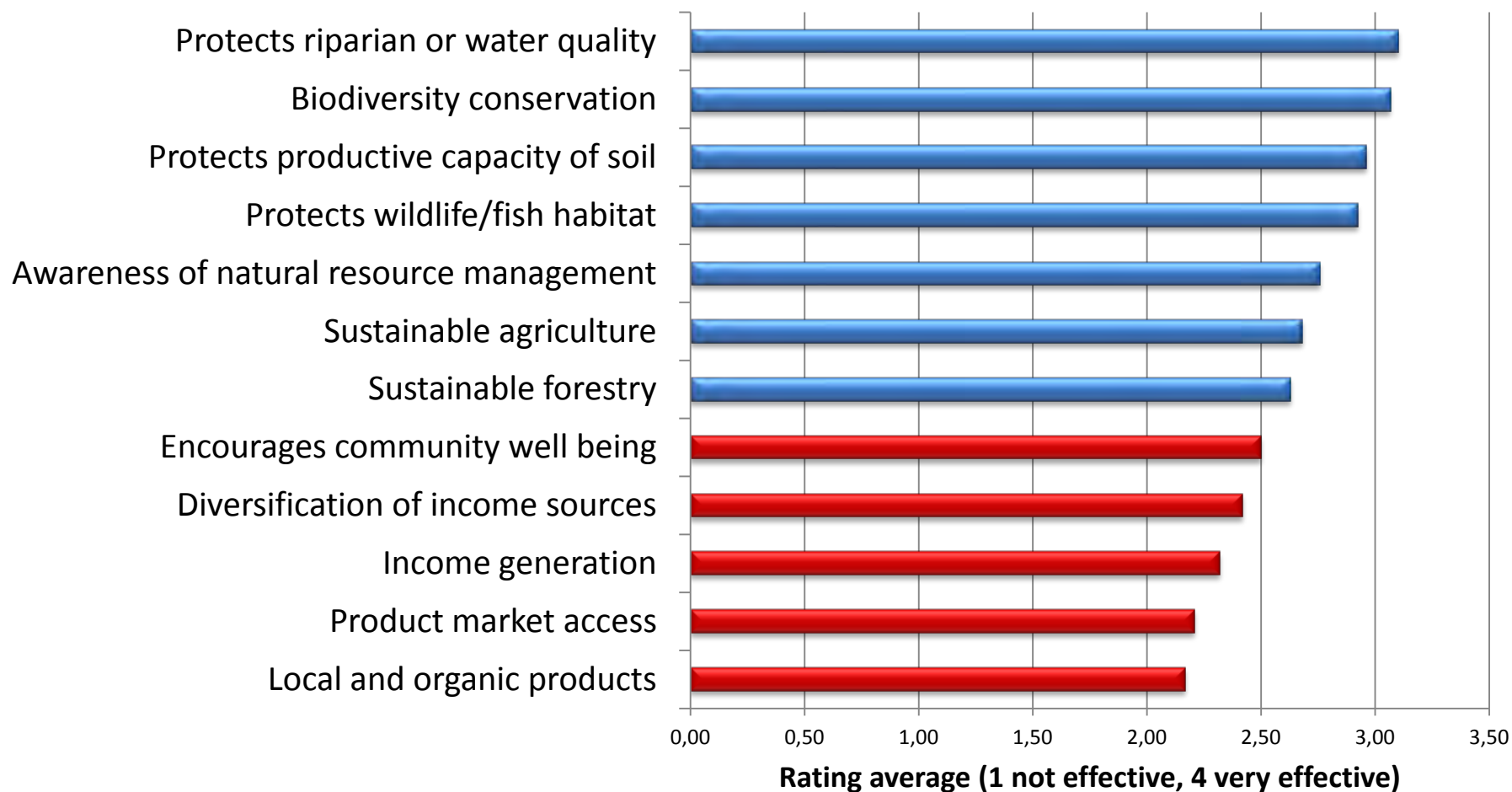- In Canada 60% said very or fairly successful

Effectiveness in meeting objectives

Chart showing rating average (1 not effective, 4 very effective):

- Protects riparian or water quality
- Biodiversity conservation
- Protects productive capacity of soil
- Protects wildlife/fish habitat
- Awareness of natural resource management
- Sustainable agriculture
- Sustainable forestry
- Encourages community well being
- Diversification of income sources
- Income generation
- Product market access
- Local and organic products

X-axis: 0,00 0,50 1,00 1,50 2,00 2,50 3,00 3,50
Rating average (1 not effective, 4 very effective)

- On average programs overall did provide some degree of effectiveness
- Most effective were environmental type objectives
- The least effective economic related objectives
- Results were similar in ranking for US and Canada

Problems preventing widespread adoption of the programs by clients

Rating average 1, not critical to 5, highly critical
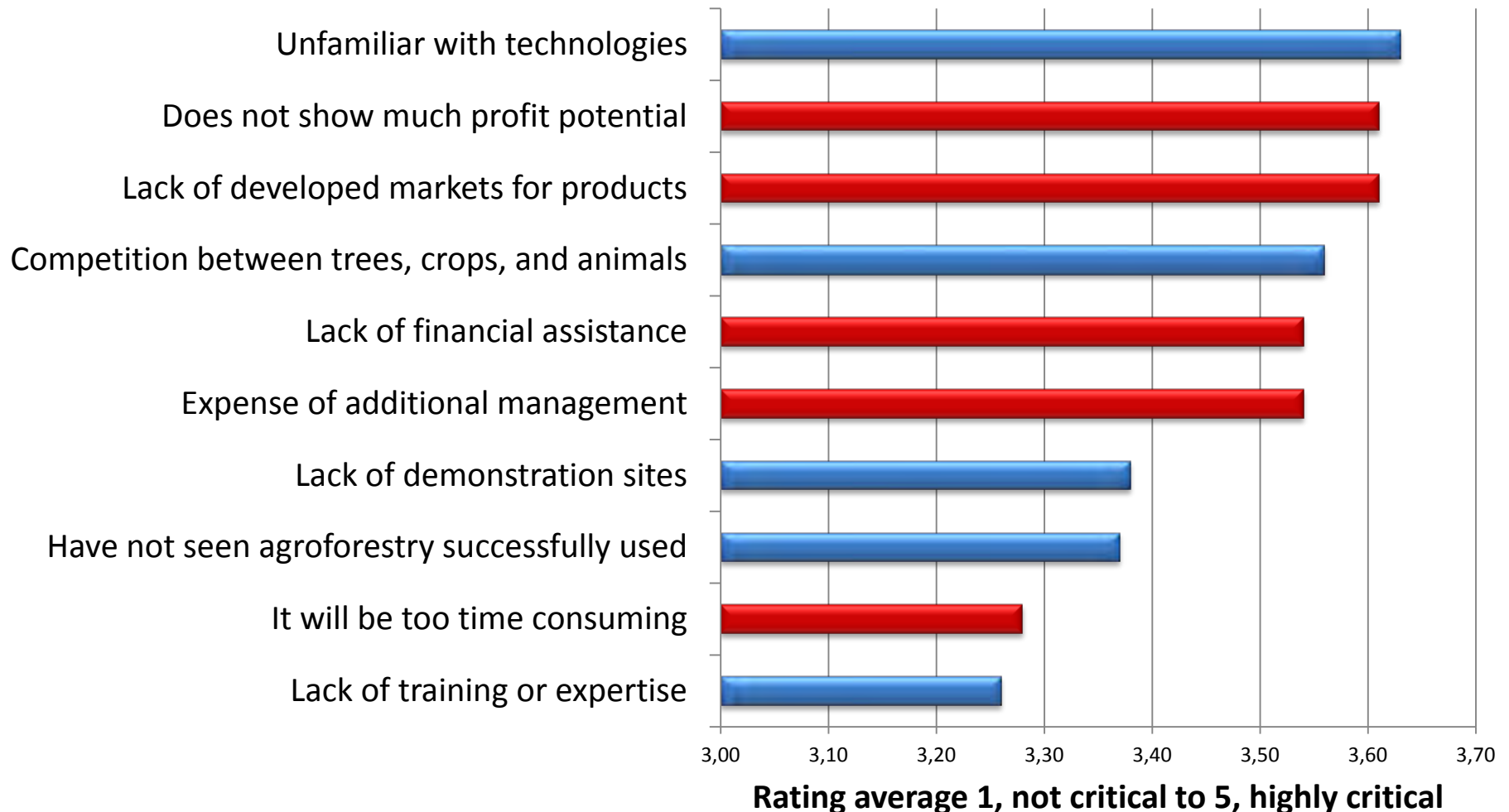
Key factors

- Appreciate potential benefits
  - Changing role of food security and environment
- Understand complexity and recognizing economic benefits
  - Deal with separation between forestry and agriculture sectors
- Need for resources (personnel and funding)
  - Government recognition
  - Dedicated programs
  - Demonstration, trainings and annual events
- Collaboration (multi-disciplinary and local organizations)

Survey Summary

- Lots of states missing or don't have programs
- There are good models out there as examples
- Most were average in terms of success
- Environmental issues trump economic in terms of effectiveness
- Economics is major obstacle
- Demonstrations and training is critical to adoption

There is momentum!
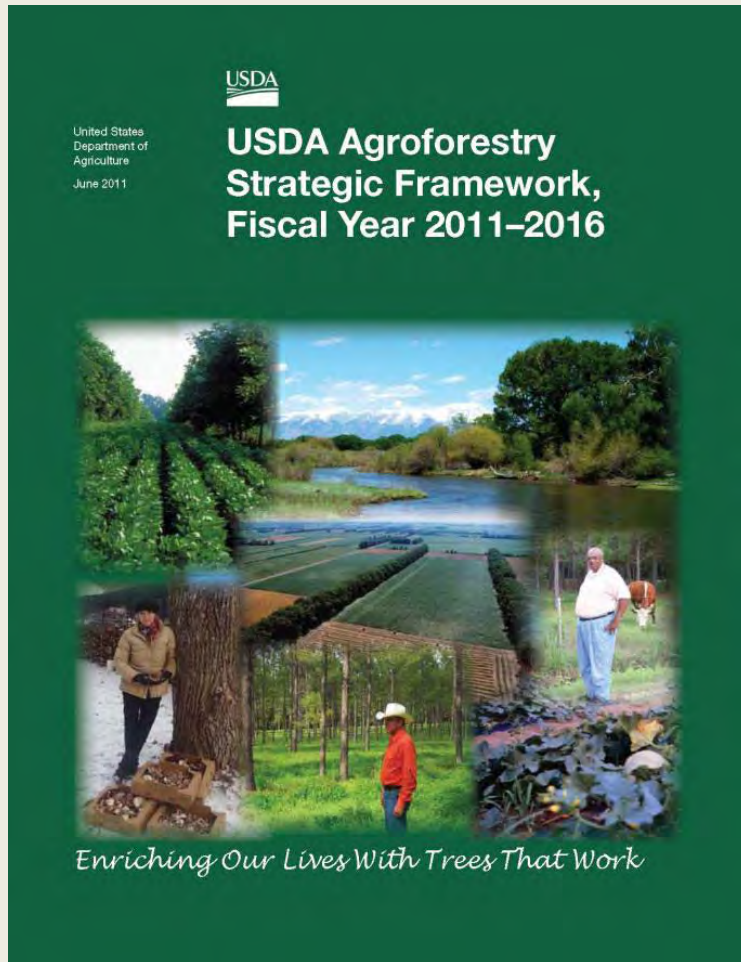
- Agroforestry MOU between USDA and Agriculture and Agri-Food Canada

- Agroforestry as a climate change mitigation and adaption tool in support of the goals of the Global Research Alliance on Agricultural Greenhouse Gases, of which the US and Canada are both members

How to better promote temperate agroforestry?

- Deliver information and program materials
  - Are we developing the right resources?
- Create collaborative mechanisms
  - Build support for agroforestry
- What about extramural funding?
  - Incentives/subsidies and grants

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