



United States Department of Agriculture



# Soil Health and Sustainability

**THE ADOPTION-DIFFUSION MODEL**  
*in Conservation Planning*



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Caribbean Area



## Definition of Terms

- **Adoption** is the behavior associated with an individual or group's deciding whether or not to accept new ideas, practices or products.
- **Diffusion** is the process by which the adoption of a new idea, practice or product spreads (transfer) throughout a group, community or society.
- **Innovation** is an idea, practice or product that is **perceived as new** by the individual or group.





## The A-D Model is used by NRCS

Adoption-Diffusion (A-D) Model is used by NRCS social scientists to describe, explain and predict human behavior relative to the adoption and diffusion of agricultural technologies.

Adoption-diffusion is a way of looking at what influences a producer's decision to adopt an agricultural practice.

Evertt Rogers, is most credited for his work in the refinement of the Adoption-Diffusion Model.





# Adoption and Conservation Planning Assumptions

- Most producers make decisions step-by-step.
- Farmers are more likely to adopt parts of a system rather than a total system in one decision.
- Its easier to first adopt a single practice and then to gradually implement a complete conservation system over time.
- To much change too fast is uncomfortable.





# 5 ATTRIBUTES TO CONSIDER IN THE ADOPTION OF A NEW CONCEPT OR INNOVATION

- **RELATIVE ADVANTAGE:** *WHAT ARE THE BENEFITS COMPARED TO OTHER IDEAS?*
- **COMPATIBILITY:** *IS THE CONCEPT COMPATIBLE WITH MY LANDUSE/FARMING OPERATIONS/BELIEFS/VALUES/COMMUNITY?*
- **COMPLEXITY:** *EASY OF APPLICATION/OPERATION AND MAINTENANCE?*
- **TRIABILITY:** *CAN THE CONCEPT BE APPLIED IN SMALL SCALE BEFORE ADOPTING?*
- **OBSERVABILITY:** *HOW LONG WILL TAKE TO GET VISIBLE BENEFITS?*





# Adoption-Diffusion Model

## *The Adoption-Diffusion Model: Decision Making 6 Step Process*

- **Awareness:** first time the person learns about a new concept but lacks information.
- **Interest:** the person develops a positive attitude towards a concept and seeks information.
- **Evaluation:** After analyzing pros and cons, the person accepts or reject the concept. How the technology can be applied/benefit the farm/ranch operation?
- **Implementation:** testing the new concept at a specific site.
- **Confirmation/Adoption:** the person confirms and accept the new concept making full use of the technology.
- **Adaptation:** customization of the practice or technique based on the producer personal experience.

**AT ANY STEP THE PERSON MAY STOP**

(Rogers and Shoemaker, 1971)





# Adoption Curve: The Community Adoption Process

CATEGORY

**INNOVATORS**

**EARLY ADOPTERS**

**EARLY MAJORITY**

**LATE MAJORITY**

**SLOW ADOPTERS**

VALUES

**RISK TAKERS**

*Venturesome. Tend to adopt unproven concepts. Some opinion/leadership.*

**ROLE MODELS**

*Usually educated viewpoint leaders. Greatest opinion/leadership.*

**DELIBERATE**

*Sensible, inclined to keep away from risks. Some opinion/leadership.*

**SKEPTICAL**

*Some degree of uncertainty. Little opinion/leadership.*

**TRADITIONAL**

*Avoid change, may never adopt. Very little opinion/leadership.*

% POPULATION

2.5

13.5

34

34

16



Innovadoras

Primeros adoptantes

Mayoría precoz

Mayoría rezagada

Tradicionales/Rezagados



## GROUPS TASK

IDENTIFY: a) Obstacles to Adoption and Diffusion of Conservation, b) Strategies to overcome obstacles

### *GUIDE QUESTIONS*

- Lack of technical information?
- Lack of understanding the information: too technical?
- Sources of information?
- Community constraints?
- Cultural, Social or personal concerns?
- Organizational obstacles?
- Economic obstacles?
- What else?





## OBSTACLES

Time has shown that there are obstacles to the adoption of conservation.  
These obstacles include:

- ➔ *Farmers may not be aware of or understand:*
- on-site and off-site causes and consequences of erosion and other natural resource problems.
  - the short and long term benefits of conservation.
  - the types and sources of available assistance.
  - the nature of conservation plans, that is, voluntary implementation.
  - that alternative practices/systems can be custom designed to meet the producer's needs and conditions.





—————→ *Farmers may not have technical information on:*

- the economic, agronomic and environmental costs and benefits of alternative practices, assistance or agency programs.

—————→ *Community constraints include:*

- the absence of support from leaders, family, friends and neighbors.
- absence of active community support structures such as districts, salespeople or local USDA offices.
- unequal access to information, financial and technical assistance and support.





- *Social psychological characteristics include:*
- aversion to risk.
  - lack of appropriate management skills.

- *Organizational barriers include:*
- conflicting messages from different sources.
  - confusion over the roles and responsibilities among the various agencies.
  - lack of coordination between and among agencies.





—————→ *Economic obstacles include:*

- lack of cash or credit for producers share of cost.
- limited cash flow while waiting for government reimbursement.

—————→ *Landlord-tenant relationships:*

- short term leases may serve as obstacles to installation and maintenance of practices/systems.
- program sign ups may require long term commitments.





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