



+H: The Human Considerations in the Adoption of Agroforestry

Introduction

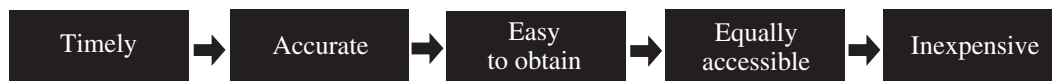
This technical note focuses on the human environment. Decisions to adopt or reject, modify or abandon are shaped and reshaped by a myriad of human factors shown to be statistically significant in the adoption process. Discussion of the human factors centers on the role of information and key categories, specifically: personal, farm, practice and community characteristics. The technical note will end with a set of principles that can guide natural resources professionals when providing technical assistance to a producer in establishing and maintaining agroforestry systems.

Producers typically follow six stages of adoption — awareness, interest, evaluation, trial, adoption and adaptation — to make decisions about the use of agroforestry.

In USDA Natural Resources Conservation Service circles, SWAPAE + H (Soil, Water, Air, Plant, Animal, Energy and Human) summarize the success formula for “getting conservation on the ground.” Giving equal consideration to both human and physical resource factors will facilitate natural resource professionals in their mission to promote the adoption of agroforestry.

Information transfer

Information is vital in acquiring new skills and identifying the agronomic, economic and environmental costs and benefits associated with agroforestry. Information is a main driver in the adoption process and must be:



The sources of information will vary by the types of producer groups and the stages of adoption. There are many media available to use in disseminating information including but not limited to brochures, newspapers, web-training materials, radio and television. In developing and utilizing the various information sources for any audience:

- Know its educational level, and if unknown, keep it simple and communicate at the sixth-grade level
- Use common terminology (no acronyms!)
- Combine the use of narrative text, pictures and illustrations
- Reflect local customs and norms
- De-jargonize the technical language
- Encourage producer feedback
- Identify a “proofreader” to review the information for its application for the specific producer group
- Evaluate usefulness of media types

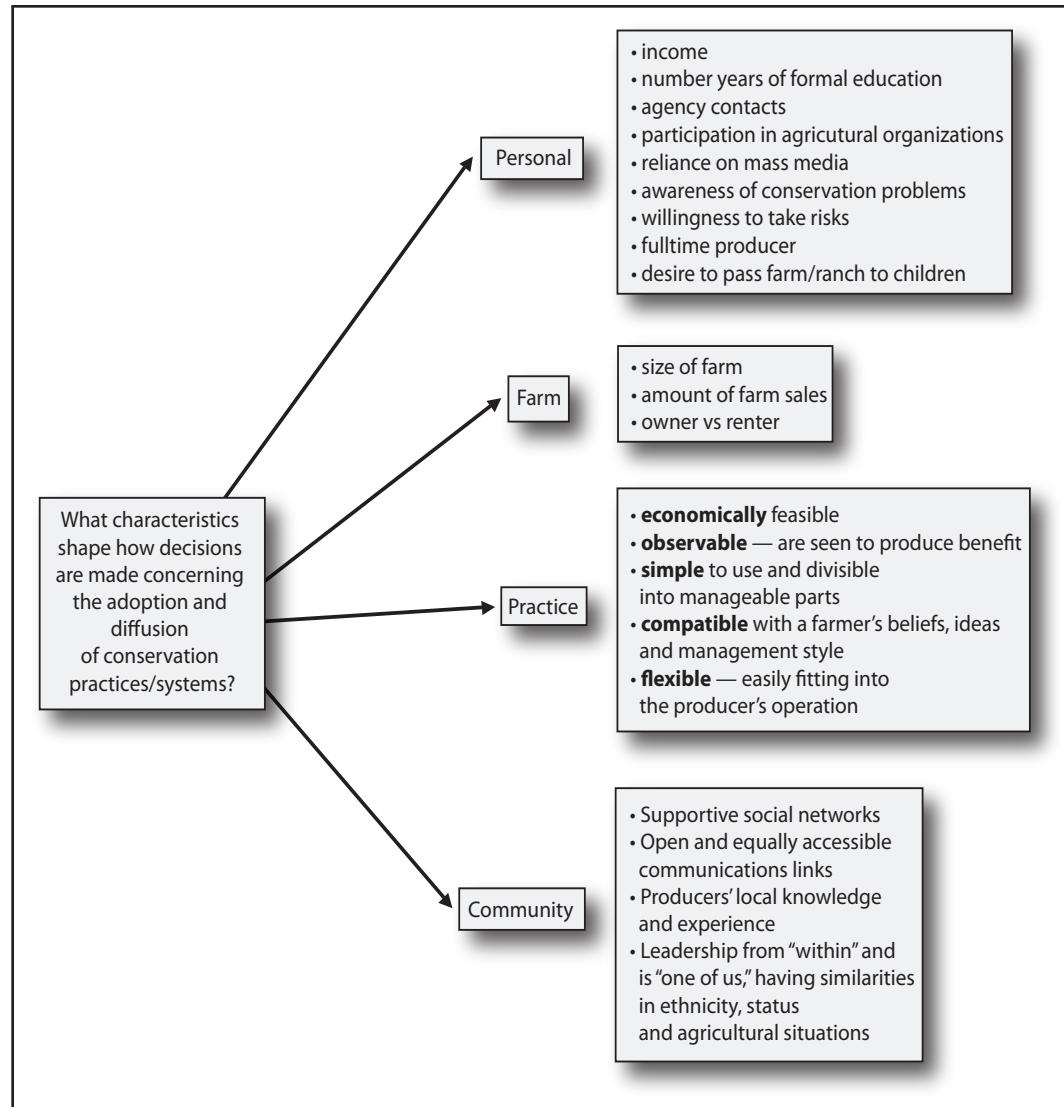
Among the most commonly used information sources are:

- Mass media
- Government agencies
- Consultants
- Opinion leaders
- Observation of a neighbor
- Testimonials
- Demonstrations
- Pilot projects
- Printed material
- Training

Note that minority, beginning and/or women producers are often left out of the main information loop. Attention needs to be given to ensure that information is current and available to these groups that are known to rely on other producers, family and friends as a source for information.

Personal, farm structure, practice and community characteristics

Everett Rogers is credited with detailing the categories of human factors that are most closely associated with adoption behavior. A categorical listing of the factors follows.



Human considerations are vital in managing natural resources — why people do what they do. The “human consideration” is critical when planning and implementing any agroforestry practice.

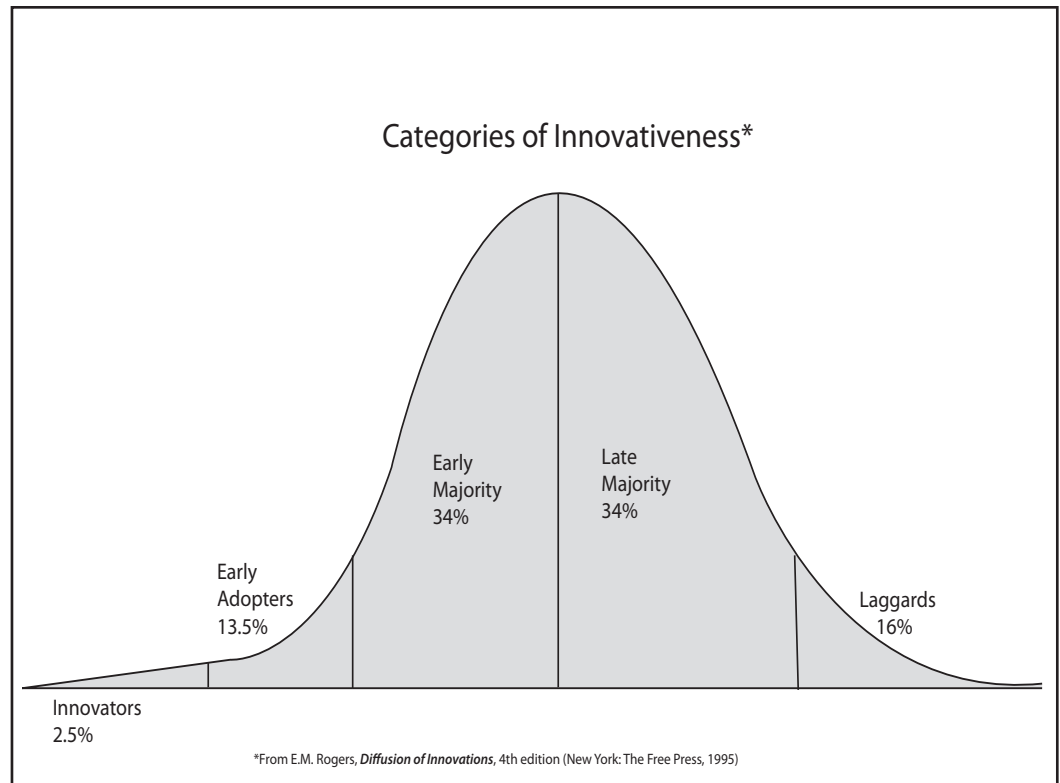
The Adoption Process ‘at work’

The classical Adoption-Diffusion model categorizes adopters into five groups based on how quickly they are likely to adopt new technology. These five groups are innovators, early adopters, early majority, late majority and laggards. The percentage of the population that falls into any one of these categories is represented in the following illustration. The bell-shaped curve also indicates the sequence of adoption relative to another group.

Although innovators are first to adopt, they are not typically the most followed individuals in the community. This may be due to a perception that they are extraordinarily fond of gadgets and will adopt untested technologies. In contrast, the most followed leaders are often the early adopters, who tend to be more cautious in their approach to new technologies and

Adoption is the behavior associated with a producer's decisions to accept a “new” idea, practice or product. And ‘new’ may mean ‘just heard of,’ or ‘just observed’ rather than ‘just off the shelf.’

tend to gather data on the reliability of the technology from many sources. These early adopters can also help others adapt to change. Early majority members particularly respect and value the opinions of the early adopters as they are viewed as “one of us” and therefore, their opinions count. The late majority, and especially the laggards, almost exclusively place value on opinions and more readily trust friends, neighbors and family. However, this is not to say that small farmers cannot be influenced by other leaders. Small farmers can be influenced through the leaders of grower associations or other locally based organizations.



Current studies have both verified and expanded the understanding that human factors play a significant role in the adoption of agroforestry systems. Research continues to support the need to consider human factors in decision making. Contemporary studies document the role of information as the driver in the adoption process. Extension specialists most often are cited as the main information source. Personal characteristics such as, planning horizons, tenure, experience with agroforestry and gender were also found to be important research conclusions.

In a study regarding the use of agroforestry practices, the perceptions of landowners in Alabama, Florida, and Georgia were surveyed. Extension specialists along with foresters were named as primary information sources. Planning horizons and the pressures of urban growth on rural lands were noted as important considerations in the adoption process.

Challenges

Challenges are embedded within all categories of human considerations. The following list represents a summary of challenges (or limitations) that have been cited as relevant to establishing and implementing agroforestry systems in general:

- Familiarity with practices and relevant information
- Technical assistance throughout the adoption process
- Demonstrations
- Training for field staff and producers
- Appropriate financial incentives
- Necessary labor
- Land available and pressure from rural urban interface
- Skills to manage equipment, competition between trees and crops
- Markets for niche crops
- Appropriate designs based on producer goals

A practical summary for practitioners

Human factors are both challenges and opportunities for natural resource professionals to consider when planning and implementing an agroforestry system.

The following statements suggest valuable ways that natural resource professionals can realistically use human consideration in their day to day work:

- Use the formula SWAPAE +H to ensure that agroforestry “gets on the ground.”
- Remember that at any time throughout the adoption process, producers can and do return to any of the six stages — Awareness, Interest, Evaluation, Trial, Adoption and Adaptation — to make decisions about the use of agroforestry.
- Understand the human environment, the personal, farm structure and community characteristics.
- “Tag” early adopters as leaders: their opinions and experiences are highly valued, and they will be useful in setting up demonstrations, pilot projects and providing testimonials.
- Consider information and open communication links as main drivers in adoption. Disseminate information that is timely, accurate, accessible to all, easy to obtain, and as well as inexpensive and use media that reflect the types of producers.
- Ensure that minority, women and beginning producers are “in the loop.”
- Know your audience — tailor the information to meet the needs of each particular group
- Personalize assistance by determining the short- and long-term goals for the operation in order to guide the “best mix” of technical assistance.
- Develop training packages for producers, practitioners and private consultants that incorporate both human and natural resource considerations.
- Remember challenges are also opportunities that underscore the need to understand and utilize human considerations in all phases of the adoption process.

References

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