**Diffusion of Innovations Theory – Adoption and Diffusion**

**The Diffusion of Innovations theory was the leading theory in agricultural extension post World War II until the 1970s.  It is still used today in agricultural extension, particularly when extension is concerned with an adoption of a particular technology (i.e. technology transfer approach to extension).**

Rate of adoption is a key feature of the theory – Everett Rogers developed adopter categories to ‘measure’ innovativeness of farmers to produce a statistical model (normal distribution curve) to show the distribution of the five adopter categories over the average time of adoption, please see the diagram below.

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Source: Adopter categorizations on the basis of innovativeness – Rogers, E. M. (2003). Diffusion of innovations (5th ed.). New York: Free Press*

Everett M. Rogers is considered a founder of the Diffusion of Innovations theory.  Rogers undertook a PhD (doctoral dissertation) in 1957 analysing the diffusion of several agricultural innovations in a rural community in Iowa.  Rogers was convinced that the adoption of innovations follows a universal process of social change.  It originated in communications to explain how, over time, an idea or product gains momentum and spreads (or diffuses, hence the name) through a specific population or social system.

(*Everett Rogers, 1934 – 2004  Source – Leadership Network)*

There are four main interacting elements of the key concept:  Diffusion of Innovations – 1) an innovation, 2) communicated through certain channels, 3) over time and 4) among members of a social system.

***Definitions***

1. **Innovation**: Is an idea, practice or object that is perceived as new by an individual or group .
2. **Communication**: The process by which participants create and share information to one another in order to reach a mutual understanding
3. **Time**: Time involved in the innovation-decision process, the time taken to adopt an innovation by the adopter and the adoption rate across the social system
4. **Social system**: Are a set of interrelated social units (e.g. individuals, informal groups, organisations) that are engaged in problem solving to achieve a common goal. it determines the boundary for a diffusion process; it can be affected by norms, and the degree to which individuals can influence one another

These four elements are present in every diffusion research study and in every diffusion program (i.e. the main elements are the variables in the diffusion process).

***Rogers Adoption Categories Explained***

**Innovators** (2.5% of social system population):

* A “venturesome” approach to change
* Quick to take up new ideas, knowledge and technologies
* Cope with uncertainty and failure
* Risk-takers
* Play an important role in introducing innovations into the system and plays a gatekeeper role in the flow of information in a social system.

**Early Adopters** (13.5% of social system population):

* “Respected” members of the system
* Represent opinion leaders and are more integrated into the social system than innovators
* Provide advice and information to others about innovations
* Are already aware of the need to change and so are very comfortable adopting new ideas
* Early adopters help trigger the critical mass when they adopt an innovation (i.e. considered a “stamp of approval”)
* Has a central position in the social system (communication network).

**Early Majority** (34% of social system population):

* “Deliberate” need to see evidence, think about and be convinced by others before being willing to adopt
* Adopt innovations before the average person
* Rarely perform leadership roles
* Serve as important links in the diffusion process as they are the connection between very early and the relatively late adopters.

**Late Majority** (34% of social system population):

* “Sceptical” cautious about change and have a questioning attitude to innovations
* Adopt new ideas just after the average person
* Adoption may result from peer pressure or economic necessity rather than motivation for change
* Innovation must be well supported by social norms to be desirable
* Possibly have few resources therefore most of the uncertainty of the innovation must be removed before the late majority feel comfortable with adopting innovations.

**Laggards** (16% of social system population):

* “Traditional” in that they are bound by tradition and are very conservative
* They are not opinion leaders and mostly considered ‘isolates’ in a social network sense (not connected strongly or to many other system members)
* The points of reference for laggards is the past
* They are very sceptical of change and are the hardest group to motivate to adopt innovations
* They take a lengthy amount of time to adopt in association with awareness of innovation
* They demonstrate resistance towards innovations and are risk averse
* They are in a vulnerable economic situation, therefore access to resources is constricted
* Blame for not adopting can be located at the individual and system level.

Rogers also listed a series of correlations that show the positive relationship between a series of social variables and the likelihood of being an innovator type. Examples of these include:  
•    Education  
•    Literacy  
•    Higher social status  
•    Large-size farms  
•    Commercial economic orientation  
•    More favourable attitude to credit  
•    More favourable attitude to change  
•    More favourable attitude to education  
•    Intelligence  
•    Social participation  
•    Urban contacts  
•    Change agent contact  
•    Mass media exposure  
•    Exposure to interpersonal channels  
•    More active information seeking  
•    Knowledge of innovations, and  
•    Opinion leadership

There are five main characteristics of innovations that determine how an innovation will be responded to by a potential farmer/end-user:

1. **Relative Advantage** – The degree to which an innovation is seen as better than the idea, program, or product it replaces.
2. **Compatibility** – How consistent the innovation is with the values, experiences, and needs of the potential adopters.
3. **Complexity** – How difficult the innovation is to understand and/or use.
4. **Trial ability** – The extent to which the innovation can be tested or experimented with before a commitment to adopt is made.
5. **Observability** – The extent to which the innovation provides tangible results.

**Rogers proposed a set of stages in decision-making in adopting an innovation**:  
•    Knowledge  
•    Persuasion  
•    Decision (adoption or rejection)  
•    Implementation  
•    Confirmation

