

As with testing, integration is essential. The farmer must do it. If he has to do it without research and extension help, it will be inefficient and slow.

b. A second dimension is integration with the market, both input and product. Much agricultural technology is embodied in a commodity. If that commodity is not available and cannot be made available, a new technology cannot be adapted, no matter what its merit. Integration involves market action to make inputs available or research-extension activity adapted to the lack of input. On the product side, if there is inadequate market, farmers cannot integrate the technology into their systems of production.

c. The third dimension is integration with national policies. National policy often works through product and input markets and sets conditions the farmer must adapt to. These conditions affect the ways he can deal with new technology. If policies are not adequate and cannot be changed, the conditions they create must be adapted to.

7. Technology Dissemination involves informing farmers of the new technology and helping them figure out how to fit it into their systems of farming.

For simple technology, informing is all that is needed, and farmers themselves can fit it into their systems. Dissemination means "to seed," and for simple technology, "seeding" is all that is needed.

The extension demonstration is one of the most effective seeding devices. It may not be as much a "demonstrating" as it is a means by which the farmer's own experimental process is facilitated. Most farmers are both experimental and skeptical. They will not adopt a practice until they have either experimented with it in their own system or have seen it perform in a system almost like theirs. The demonstration facilitates this process and is literally an "on-farm trial."

As technology becomes more complex, more assistance is needed from extension to help farmers fit it into their systems.

8. Diffusion and adoption are largely a function of the farmer dynamic. Farmers themselves, through their kinship groups and other social systems, constitute a powerful force, working either to facilitate or to impede diffusion. This farmer dynamic has been responsible for much diffusion throughout history, unaided by research and extension. Extension is most effective when it takes advantage of and encourages the farmer dynamic.

Diffusion and dissemination are distinguished here to reflect the distinction between outside forces and the farmers' own force in the diffusion function of the process.