Communication

Two-way process of reaching mutual understanding, in which participants not only exchange (encode-decode) information, news, ideas and feelings but also create and share meaning. In general, communication is a means of connecting people or places. In business, it is a key function of management--an organization cannot operate without communication between levels, departments and employees.

Communication is the essence of human interaction and learning.

Communication is a process of exchanging information, ideas, thoughts, feelings and emotions through speech, signals, writing, or behaviour. In communication process, a sender (encoder) encodes a message and then using a medium/channel sends it to the receiver (decoder) who decodes the message and after processing information, sends back appropriate feedback/reply using a medium/channel. The nature of communication is dependent on interaction between two or more individuals and understanding is constructed through that interaction.

Communication is a basic human right and essential to our quality of life as a social species. As human beings, we use communication to: relate to others, socially connect, greet, call attention, share feelings, express an opinion, agree, disagree, explain, share information, question, answer, tease, bargain, negotiate, argue, manipulate, compliment, comment, protest, complain, describe, encourage, instruct, provide feedback, show humour, discuss interests, be polite, make friends, express interest or disinterest, etc..

Agricultural communication

Agricultural communication is a field of study and work that focuses on communication about agriculture-related information among agricultural stakeholders and between agricultural and non-agricultural stakeholders. It is done formally and informally by agricultural extension and is considered a subset of science communication. However, it has evolved into its own professional field.

By definition, agricultural communicators are science communicators that deal exclusively with the diverse, applied science and business that is agriculture. An agricultural communicator is "expected to bring with him or her level of specialized knowledge in the agricultural field that typically is not required of the mass communicator". Agricultural communication also addresses all subject areas related to the complex enterprises of food, feed, fibre, renewable energy, natural resource management, rural development and others, locally to globally. Furthermore, it spans all participants, from scientists to consumers - and all stages of those enterprises, from agricultural research and production to processing, marketing, consumption, nutrition and health.

A growing market for agricultural journalists and broadcasters led to the establishment of agricultural journalism and agricultural communication academic disciplines.
The job market for agricultural communicators includes:

- Farm broadcasting
- Journalists and editors of agricultural/rural magazines and newspapers
- Communication specialist, public relations practitioner, or Web developer for agricultural commodity organizations, businesses, non-profits
- Sales representative for agricultural business
- Science journalist
- Land-grant university communication specialist
- Public relations or advertising for firms that specialize in or have agricultural clients.

**Modern Communication Tools in Agriculture Extension**

1. **Radio**

Radio is the most powerful, and the cheapest mass medium for reaching large numbers of people in isolated areas. With the revolution of the transistor, even the remotest villages have access to rural radio, which builds on the oral tradition of rural populations. Although men own the majority of radio receivers, women can listen to programmes at home in the evenings when the main chores of the day are finished.

Radio is an important tool for the rapid diffusion of important messages on new agricultural production ideas and techniques. Combined with other media, it can be used for training and the transfer of technologies in agriculture. Finally, radio is a tool that can be used to develop community cohesion and solidarity. Radio programmes are most effective when produced with audience participation, in local languages and with consideration for cultural traditions. Successful features include live public shows, quizzes and village debates. Radio can be the medium for the direct communication of the farmers with the expertise which leads them to learn new ideas and technologies and deal with their problem in the farm.

2. **Television**

Television has the greatest impact on young people and, as such, has the ability to shape values, attitudes and perceptions in both positive and negative ways. Indeed, television is a prestigious, powerful and empowering tool that can raise awareness, generate discussion and increase knowledge. So television can be an effective tool for the communication and dissemination in the field of agriculture. Although television is not generally available to communities in very isolated rural areas, increasingly in many developing countries it is becoming a reality in the countryside. Drama captures people's imagination like no other television format, and the half-hour episodes used the power of drama to impart education messages. This technique, known as "edutainment", conveys educational messages through an entertainment programme. In context of Nepal various television programs are given by Nepal Television such as ‘Krisi Karyakram’ which is broadcasted daily which gives farmers...
knowledge about various agricultural practices and also shows various success stories of the farmers.

3. Audiovisual media
Low-cost audio and visual media, such as video, slide sets, filmstrips, audiocassettes and flipcharts, are valuable tools to motivate and assist in training groups. These technologies have been improving and developing over the years, and equipment is now cheaper, lighter, battery-operated and portable, thus making it suitable for use in rural areas. Audiovisual media can be used effectively at convenient times and places: most of the farmers do not have the time or money to travel to training centres and, for cultural reasons, often cannot attend training sessions with men.

There are many examples of audiovisual training programmes and courses that have been produced and used with farmers. They cover topics ranging from agricultural production techniques, natural resource management, small-scale irrigation, vegetable production, livestock management, food processing and storage to arithmetic and accounting, improved nutrition, breastfeeding, reproductive health and sanitation. Care has always been taken to ensure that half of the national staff trained in the production and use of these audiovisual programmes is women.

“What I hear I forget.
What I see I remember.
What I do I learn.”

4. Multimedia
Communication programmes should make use of all media infrastructures and channels available in a country, both modern and traditional, in an orchestrated and mutually reinforcing fashion. The combination of several media approaches and tools with interpersonal channels multiplies the impact of communication campaigns, which are being used increasingly to support clearly defined development priorities. Multichannel communication approaches can also help in identifying appropriate agricultural technologies for farmers as well as in disseminating the required knowledge and skills. This technology can be effectively used in the field of agriculture for demonstrating various modern agricultural technologies and ideas and use of modern tools in agriculture. A recent evaluation of the Soul City "edutainment" programme in South Africa has demonstrated the added value and effectiveness of using a multichannel approach. Finally, educational packages combining audio and videotape together with written materials were produced to facilitate learning processes in both formal and informal settings. A public relations campaign strengthened the messages further by placing the issues on the public agenda by using editorial space, competitions and a range of actuality programmes in the various media.
5. Electronic Networking

Today, the Internet's World Wide Web and electronic mail systems comprise a global "people's network" for communicating and sharing information. Farmers and associations in developing countries are exploring the challenges and possibilities unfolded by Internet applications and are beginning to invest in the use of these tools for promoting their interests. E-Agriculture is the latest modern concept developed in recent world that provide the access to the farmers to gain the knowledge on latest and modern technologies in every corner of the world.

Communication through e-mail networks helps the farmers with the best opportunities to overcome many of the constraints that limit their capacity to address national and local development issues. Communicating with the international community as well as with each other, farmers groups can gain access to information about best practices, appropriate technologies, ideas and problems of other groups with similar interests. Despite the greater access that farmers groups and associations now have to new information technologies, they are still underrepresented on most networks. Entering the new electronic frontier of cyberspace remains a challenge to most women of the world, not to mention rural women.


With the development of various social networking sites like Facebook, Twitter, Myspace etc agricultural communication has reached to a new era. Various modern agricultural technologies can me shared and disseminated through the use of such social networking sites. This has concise the world into a small place. Modern technologies can be shared among the peoples through the use of these social sites. Farmers and agriculturist circle and groups are created in these social sites that help to communicate farmers with expertise exclusively.

7. Rural Telecentres

Rural community Telecentres are part of another approach being used by development agencies and their partners to extend access to the Internet, bringing it closer to rural community farmers and the intermediary organizations that provide services to these communities. Telecentres are shared information and communication facilities that provide communities with telephone, fax and Internet services as well as access to equipment such as cassette and video players, photocopiers and computers.

Telecentres can provide communities with knowledge and information from outside sources, which can then be integrated with local knowledge. For example, a Telecentres can be used by a local organization to collect information and develop material for public awareness programmes on issues such as sustainable farming, use of modern technologies in agriculture etc. Telecentres can be used by training institutes to obtain distance learning materials for supplementing courses. They can also be used by communities to share information with other communities about various agricultural practise. For example, locally developed solutions for agricultural problems can be announced and shared with other communities with
similar problems and agro-ecological conditions. Furthermore, linking telecentre facilities with other media can increase the local impact of such centres, exchanging information with rural people who cannot access their services. If local radio stations broadcast information collected on the Internet, for instance, rural women who are unable to use the services of a telecentre may still benefit from the information made available through this electronic channel.

8. GIS (Geographic Information System)

GIS manages and interprets data about an area’s resources and infrastructure, such as digital maps or images of a village, watershed, or entire country. Researchers, planners, and other technical specialists are making greater and greater use of this information especially in the field of Agriculture. The tools include systems to store, manage, and analyse geographically referenced data (geographic information systems, or GIS); devices that measure geographic location (global positioning system, or GPS, receivers); and airborne data collection systems that provide periodic land use, land cover, and other thematic information (aerial photos and satellite remote sensing).

While obstacles exist—particularly in developing countries—geographically referenced data is providing new insights into global issues such as the patterns and processes of human settlement, natural resource use and degradation, agricultural performance, disease, and conflict. Agriculture, unlike most other forms of economic activity that benefit from geographic concentration, is tied to a natural resource base that is spatially dispersed and highly variable. Physical, social, and economic geography thus play a crucial role in determining the scale and scope of agriculture at a given location. One of the most direct applications of GIS in developing countries is participatory mapping, where, for example, specialists interact with farming communities to create spatial inventories of natural resources, property status, land-use rights, and perceived problems. Such inventories feed into a consultative process aimed at building consensus on more equitable and sustainable resource-management arrangements. Experience has shown that villagers can quickly relate to geographic representations of their surroundings. Community mapping can also help foster the process of transferring greater decision making power and fiscal responsibility to local levels of government.

GIS technology provides tools for visualizing, integrating, and analysing spatial data and a unique capacity to merge information from many sources. By using a common spatial framework, GIS enables users to analyse how physical, social, and economic factors interact. Constraints to widespread use of GIS have been its high cost and complexity and the difficulty of obtaining geographically referenced (georeferenced) data. However, as the technology has become cheaper and less complex, it has become more accessible to non-specialists. From agricultural point of view GIS helps to analyse data and suitable locations for growing different field crops. Moreover GIS and GPS technologies help farmers know about how much seed to buy, where to plant and how much compost or fertilizer to use. Balancing the inputs and outputs on a farm is fundamental to its success and profitability. The ability of GIS to analyse and visualize agricultural environments and workflows has proven to be very beneficial to those involved in the farming industry. From mobile GIS in the field
to the scientific analysis of production data at the farm manager's office, GIS is playing an increasing role in agriculture production throughout the world by helping farmers increase production, reduce costs, and manage their land more efficiently.

9. Call Centres
Call centres are the recently developed communication tools used in agriculture termed as “Krisi samparka Kendra”. These centres are provided with the toll free number where farmers can have exclusive conversation with the expertise and deal with their problems in the field. It provides the farmers the easy access to solve their problem and get knowledge and ideas about new tools and technologies. This service is extensively used in India for the development of agriculture.

10. Mobile
Mobile is an electronic media used for the purpose of communication for longer distance. People can share ideas, thought, views, information about new technologies in agriculture by the use of mobile. Mobile is a portable device can be easily taken from one place to another. Mobile Network Company provides various services like SMS, MMS, and GPRS etc which have made the communication more convenient. Mobile is also provided with GPS system nowadays with the advancement of the technologies. So mobile can be effectively used for the communication and extension also in the field of agriculture. For example daily update about the market price of various commodities is provided through SMS in India.

Conclusion
Information and communication have always mattered in agriculture. Ever since people have grown crops, raised livestock, and caught fish, they have sought information from one another. What is the most effective planting strategy on steep slopes? Where can I buy the improved seed or feed this year? How can I acquire a land title? Who is paying the highest price at the market? How can I participate in the government’s credit program? Producers rarely find it easy to obtain answers to such questions, even if similar ones arise season after season. Farmers in a village may have planted the “same” crop for centuries, but over time, weather patterns and soil conditions change and epidemics of pests and diseases come and go. Updated information allows the farmers to cope with and even benefit from these changes. Providing such knowledge can be challenging, however, because the highly localized nature of agriculture means that information must be tailored specifically to distinct conditions.
Agriculture is facing new and severe challenges in its own right. With rising food prices that have pushed over 40 million people into poverty since 2010, more effective interventions are essential in agriculture (World Bank 2011). The growing global population, expected to hit 9 billion by 2050, has heightened the demand for food and placed pressure on already-fragile resources. Feeding that population will require a 70 percent increase in food production (FAO 2009). Filling the stomachs of the growing population is only one reason agriculture is critical to global stability and development. It is also critical because one of the most effective ways
of reducing poverty is to invest in and make improvements in the agricultural sector. Even after years of industrialization and growth in services, agriculture still accounts for one-third of the gross domestic products (GDP) and three-quarters of employment in sub-Saharan Africa. Over 40 percent of the labour force in countries with per capita incomes in the US$ 400 to 1,800 ranges works in agriculture (World Bank 2008). Because agriculture accounts for the vast majority of the poor’s livelihood activities, it is also the sector that holds the most promise for pro-poor economic growth. In fact, agriculture is around four times more effective at raising incomes among the poor than other sectors (World Bank 2008). No less important, improved agriculture also has a direct impact on hunger and malnutrition, decreasing the occurrences of famine, child stunting, and maternal infirmity. Given the challenges, the arrival of Information communication technology (ICT) is well timed. The benefits of the green revolution greatly improved agricultural productivity. However, there is a demonstrable need for a new revolution that will bring lower prices for consumers (through reduced waste and more-efficient supply chain management), contribute to “smart” agriculture, and incentivize farmers (for example, through higher income) to increase their production. Public and private sector actors have long been on the search for effective solutions to address both the long- and short-term challenges in agriculture, including how to answer the abundant information needs of farmers. ICT is one of these solutions, and has recently unleashed incredible potential to improve agriculture in developing countries specifically. Technology has taken an enormous leap beyond the costly, bulky, energy-consuming equipment once available to the very few to store and analyse agricultural and scientific data. With the booming mobile, wireless, and Internet industries, ICT has found a foothold even in poor smallholder farms and in their activities. The ability of ICTs to bring refreshed momentum to agriculture appears even more compelling in light of rising investments in agricultural research, the private sector’s strong interest in the development and spread of ICTs, and the upsurge of organizations committed to the agricultural development agenda. Hence various communication tools has been effectively used in the field of agriculture and they have been playing a key role in the dissemination and spread of the information, ideas, news and views regarding agriculture. With the pass of time these communication tools has been in advanced and more effective forms.