Rural extension and communication in the rural environment

Extensão rural e comunicação no ambiente rural

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ABSTRACT
Rural extension is one of the branches of Agrarian Sciences that is concerned with providing formal education services of a continuous nature for the rural and fishing environment, assisting and promoting processes of management, production, processing and commercialization of activities, as well as agricultural and non-agricultural services, including agroextractive, forestry and artisanal activities. Rural extension is also understood as "a process of out-of-school education, or, not formal, whose objective is to contribute to the elevation of the quality of life of rural families and, consequently, to the well-being of society as a whole". The technical assistance provided to family farmers is of relevant importance in the process of communication and dissemination of new technologies generated by research (and possibly by farmers themselves or by official rural extension services) that are essential to rural development in its broadest sense, that is, in the development of agricultural, forestry, extractivism and fishing activities. The importance of technical assistance and rural extension in bringing technology closer to society is undeniable. However, in addition to similar ones, these two strands contain differences in important points, which leave them far apart from each other. In the rural extension it is necessary to have a link between the research and the productive sector, which, in this case, is the farmer. The focus of rural extension is to bring to the rural community from basic knowledge (such as borrowing from banks, economy, etc.) to technical knowledge in agriculture, including technology (materialization of science studied). It consists of being sure that the small farmer will know how to manage his land and his income, and creates an independence so that, in case of a problem, the farmer and his family know how to solve it without major problems and without requiring a technical assistant constantly. It is an educational measure aimed at improving production and income and, consequently, quality of life of the rural family. Technical assistance creates a certain dependence on the small farmer. It aims to solve immediate problems, with greater objectivity, but does not intend to pass on knowledge to the rural family. It is a way of using technology in a technical way, but with an individual character.

Keywords: technical assistance, farmer, environmental education.

RESUMO
A extensão rural é um dos ramos das Ciências Agrárias que se ocupa em fornecer serviços de Educação Formal de caráter continuado para o meio rural e pesqueiro, auxiliando e promovendo processos de gestão, produção, beneficiamento e comercialização das atividades, bem como dos serviços agropecuários e não agropecuários, incluindo as atividades agroextrativistas, florestais e artesanais. A extensão rural também é entendida como "um processo de educação extraescolar, ou, não formal, cujo objetivo é contribuir para a elevação de qualidade de vida das famílias rurais e por via de consequência, para o bem-estar de toda a sociedade". A assistência técnica fornecida a agricultores familiares é de relevante importância no processo de comunicação e de difusão de novas tecnologias geradas pela pesquisa (e eventualmente pelos próprios agricultores ou pelos serviços de

extensão rural oficiais) que são essenciais ao desenvolvimento rural no seu mais amplo sentido, ou seja, no desenvolvimento das atividades agropecuárias, florestais, de extrativismo e pesqueira. A importância da assistência técnica e da extensão rural na aproximação da tecnologia em direção da sociedade é inegável. Porém, além de parecidas, essas duas vertentes contêm diferenças em pontos importantes, que as deixam bem distantes uma da outra. Na extensão rural é necessário que tenha uma ligação entre a pesquisa e o setor produtivo que, no caso, é o agricultor. O foco da extensão rural é levar à comunidade rural desde conhecimentos básicos (como pegar empréstimos em bancos, economia, etc.) até conhecimentos técnicos na área de agricultura, incluindo a tecnologia (materialização da ciência estudada). Consiste em ficar certo de que o pequeno agricultor saberá como administrar sua terra e sua renda, e cria uma independência para que, caso ocorra algum problema, o agricultor e sua família saibam como resolvê-lo sem grandes problemas e sem necessitar de um assistente técnico constantemente. É uma medida educativa que visa o melhoramento da produção e renda e, consequentemente, qualidade de vida da família rural. A assistência técnica cria uma certa dependência do pequeno agricultor. Ela visa resolver problemas imediatos, com maior objetividade, mas não tem a intenção maior de repassar o conhecimento para a família rural. É uma forma de utilizar a tecnologia de forma técnica, mas com caráter individual.

Palavras chave: assistência técnica, agricultor, educação ambiental.

1 INTRODUCTION

The emergence of the Extension is treated in several historical moments of the formation of humanity. However, the institutionalization of rural extension occurred in the United States in the mid-eighteenth century, in 1914, at a time of great transformations of various sectors of the American economy, from the Industrial Revolution. In Brazil, rural extension actions have been present since the late 1940s, with the creation of the Rural Credit and Technical Assistance Association of Minas Gerais.

The rural environment, for a long time, was erroneously associated with the delay and rural extension institutions emerged driven by the ideology of modernization linked with the idea that the increase of modern production techniques would cause improvements in the living conditions of populations in rural areas, through the model of diffusion of technology. This unilateral and vertical perspective was the subject of great discussions in the academic circles, and had as main exponent Paulo Freire, through his work Extension or Communication?. In it, Paulo Freire proposes ways to ensure dialogical and participatory processes between technicians and farmers or, as he used to say, among educators and students, in a continuous process of pedagogical feedback.

Brazilian rural education was historically structured from compensatory policies and proposals, following an urban-centered perspective that promoted the subordination

of man from the countryside to capital. The reflexes of this process still influence rural education and, specifically, educational programs aimed at the technical, social and environmental training of traditional and settled producers. It is noteworthy that most educational strategies developed in areas of family agriculture have repeatedly disregarded the knowledge historically constructed by the peasant population, seeking to replace the knowledge and attitudes of the man in the field with scientific knowledge and urban values.

It is known that the rural extension consists of two dimensions: one communicational and the other educational. The communication dimension consists of bringing useful and relevant information to the rural producer and in the educational help to acquire knowledge, skills and attitudes to efficiently use this information. These aim to make the farmer able to improve his standard of living by the rational and effective use of the knowledge, skills and information acquired.

Thus, it can be said that rural extension is an educational process that gives vision, understanding and teaches why to do, thus increasing the capacity of farmers and rural families to learn, which means stimulating creativity and reinforcing criticality. This is not just a process to increase the skill and competence of how to do it. To talk about rural extension is to talk about education. And to talk about education is to approach an important aspect of humanity: transformation. The Rural Extension is a non-formal education, where educators and students, from the knowledge of each one, build new knowledge. A process made by the farmer, who throughout history appropriates knowledge, and by the rural extensionist, who in academia and science prepares.

2 ORIGIN OF RURAL EXTENSION

The word "extension" originates from the Latin EXTENDERE, "extend, widen, spread".

The emergence of the Extension is treated in several historical moments of the formation of humanity. However, there are many controversies: where and when did it arise?. Those who dealt with the origin of the extension recorded the emergence in ancient history in which it coincides with the emergence and development of the first civilizations and the emergence of writing (around 4,000 a.C).

The Rural Extension is born in the United States, at a time of great transformations in various sectors of the economy, provided by the Industrial Revolution. Another historical perspective on the roots of rural extension in the United States was the War of

Succession, which represented for American agriculture, the transition from the slave structure to the mercantile and capitalist structure influenced by the Industrial Revolution (FONSECA, 1985).

In the mid-eighteenth century, it was usual to train farmers' associations in several municipalities, where meetings were held with lectures given by invited technicians and enlightened farmers in search of solutions to production and technology problems, at that time it was usual to use technical circulars, fairs and competitions.

With the creation of the official extension service, through the Smith-Lever Act in 1914, it fit perfectly with the purpose of the groups interested in the modernization of American agriculture. This law enabled the constitution of the famous tripod teaching, research and extension.

Another important historical factor to be considered, which consolidated the rural extension, was at the beginning of the 20th century, when cotton weevil invaded the United States, leading farmers to abandon that crop, was when the figure of Seaman Knapp, professor of agronomy considered the father of Rural Extension appeared. However, only in 1914, the Federal Government of the United States, after having encamped several methodological experiences of rural extension, institutionalized and formalized the Cooperative Work of Rural Extension.

From that moment, technicians of the official extension service, working in favor of "rural development", would act in order to make the desired conversion of farmers, hitherto tried without much success by companies interested in the modernization of the sector. Therefore, interests of financial, commercial and industrial companies prevailed in the pregnancy of the rural extension model.

3 HISTORY OF RURAL EXTENSION IN BRAZIL

From the 1960s on, a model was adopted due to a joint action organized by the tripod: teaching, research and extension. In other words, universities, research and rural extension agencies were responsible for introducing technological packages aimed at the intensive use of inputs and machines, with the objective of increasing productivity.

The rural extension in Brazil was born under a strong North American influence and aimed to overcome the delay in agriculture. However, in order to achieve the planned objectives, there was a need for the rural community to be educated, so that it had the capacity to acquire equipment and industrialized supplies necessary for the modernization of its agricultural activity, thus moving from a situation of delay in relation to production

techniques and management to a more modern technicalization. The production model adopted would serve so that rural man could be inserted in the dynamics of a market society, with increased production, with better quality and higher yield.

3.1 PHASES OF RURAL EXTENSION IN BRAZIL

The first phase, called "welfare humanism", prevailed from 1948 until the beginning of the 1960s, in which the extensionist's objectives were to increase agricultural productivity and, consequently, improve the well-being of rural families with increased income and decrease in the labor required to produce. Despite taking into account the human aspects, the methods of the extensionists at that time were also marked by paternalistic actions. That is, they did not encourage the discussion of problems together with farmers and only sought to induce behavior changes through pre-established methodologies, which did not favor the flowering of critical awareness in individuals, meeting only their immediate needs.

The second phase was called "productivist diffusionism", between 1964 and 1980 and was based on the acquisition by producers of a modernizing technological package, with intensive use of machines and industrialized insums. During this period, the rural extension served as an instrument for the introduction of the man of the field in the dynamics of the market economy.

The creation of the Technical Assistance and Rural Extension (ATER) system was created with the objective of promoting increased productivity and the change of the mentality of producers, from the "traditional" to the "modern". At that time the rural extension was considered as an instrument that aimed to persuade producers to the adoption of new technologies. For extensionists of the time, the empirical knowledge of the producers was not taken into consideration and interest, as well as their real needs. Thus, the rural extension assumed a tutorial and paternalistic character.

During this same period, a Brazilian Company of Technical Assistance and Rural Extension (EMBRATER) was created, where there was a great expansion of the rural extension service in the country. With the emergence of EMBRATER, rural extension reached almost 78% of Brazilian municipalities in 1980, compared to only 10% of municipalities in 1960. However, as the role of extensionists was conditioned by the existence of agricultural credit, small family farmers who did not have access to credit began to be on the sidelines of the rural extension service.

From the early 1980s to the present day, a new proposal for a rural extension began, which advocated the construction of a "critical awareness" in extensionists. "Participatory planning" was an instrument of liaison between advisors and producers.

This phase became known as "critical humanism". These methodologies of rural intervention had as guidelines the participatory principles, which consider the cultural aspects of the target audience. The differential between extension methodologies in the era of "productivist diffusionism" and the era of "critical humanism" refers to the issue of active participation of farmers.

Although there is a guideline in favor of the application of participatory principles, most ATER companies continue to have the same basic orientation that is the inclusion of the small family farmer in the logic of the market, to make him increasingly dependent on industrialized insums and subordinate him to industrial capital.

The biggest challenge for research institutes and universities is the formatting of strategic models that enable the participatory methodologies of ATER, where family farmers are inserted throughout the process, that is, from their conception to the application of technologies. Thus, these farmers become direct agents in the process, and resulting in the valorization of traditional knowledge.

The rural extension in Brazil arose in the post-war period, in Minas Gerais, according to the Model of the United States, as a response of the State to a demand for the initial expansion of capitalism in the field, given the need of the Brazilian industry, which is implemented from 1930, combining rural credit, technological knowledge and dissemination of agricultural techniques, through technical assistance.

Only in 1952 did the Technical Assistance and Rural Extension Service (ATER) develop its actions with the objective of educating, but always seeking a reconciliation between capital and work, to cushion social conflicts and enable capitalist penetration and accumulation in the field, through technological packages and programs supported by international capital, and in this phase of the "economic miracle" , until the mid-1970s, enabled a great growth of ATER services.

The economic crisis of the 1980s, the political opening, administrative reform and the neoliberal policy of modernization of the State lead to a crisis of rural extension services throughout Brazil, even with a new direction to rural extension as an educational practice and methodology of participation and organization of small producers.

Only in 1995, with the holding of the National Seminar Family Agriculture and Rural Extension and with the creation of the National Program of Family Agriculture

(PRONAF) began a restructuring of ATER in Brazil, culminating, in 2003, with the National Policy of Technical Assistance and Rural Extension through the Ministry of Agrarian Development (MDA), in which the mission of Technical Assistance and Rural Extension is established : "Participate in the promotion and animation of processes capable of contributing to the construction and implementation of sustainable rural development strategies, centered on the expansion and strengthening of family agriculture and its organizations, through educational and participatory methodologies, integrated with local dynamics, seeking to enable the conditions for the exercise of citizenship and the improvement of the quality of life of society".

The Coordination of Integral Technical Assistance (CATI), an organ of the Government of the State of São Paulo for technical assistance and rural extension, defines, from a new vision, rural extension and technical assistance as the action or work carried out by technicians, in order to bring knowledge to producers and their families, so that they produce more and better , at lower costs and which earn higher incomes. CATI defines as its mission: "To promote sustainable rural development, through participatory programs and actions, with the involvement of the community, partner entities and all segments of the agricultural business", already seeking in its mission to meet the principles of sustainable rural development, participatory focus and partnerships.

In 2003, the MDA built a new National Policy for Technical Assistance and Rural Extension (PNATER), after a discussion process involving extensionists, leaders of organizations linked to family farmers and social movements, and experts from universities. Based on the Guidelines of the PNATER, the National Program for Technical Assistance and Rural Extension (PRONATER) was elaborated in 2005.

Through Law 12.188/2010 was officially created the National Policy of Technical Assistance and Rural Extension for Family Agriculture and Agrarian Reform - PNATER and the National Program of Technical Assistance and Rural Extension for Family Agriculture and Agrarian Reform - PRONATER. In 2012, the 1st National Conference on Technical Assistance and Rural Extension (CNATER) was held and in 2016 the II CNATER was held to discuss guidelines and objectives in terms of ATER policies.

3.2 METHODOLOGIES USED IN THE EXTENSION

There are a number of tools that have been developed for the development of rural extension. Among these tools or methodologies we can mention the Rapid Rural Diagnosis (DRP), the Situational Strategic Planning (PES), the National Policy of

Technical Assistance and Rural Extension (PNATER). We can define Rapid Rural Diagnosis (DRP) as being "a growing family of approaches and methods aimed at allowing the local population to share, increase and analyze their knowledge about reality, with the objective of planning actions and acting in this reality".

Among the tools used in the DRP, the main ones are visual and interactive diagrams that represent aspects of a given reality and are being constructed by a group of people under discussion. For each tool there are specific procedures that become abstract instruments where reality is focused within a cycle of past, present and future.

Situational Strategic Planning (PES) has three main characteristics. The first aims to identify and analyze a problematic situation among the individuals involved, taking into account their perceptions and points of view. This principle is called subjectivism, and assumes that each individual will have an interpretation of various situations and that they are directly influenced by their knowledge, experiences, beliefs, position within the social organization in which they live, among others (RIEG; ARAÚJO FILHO, 2002). The PES also recommends that it is not possible to plan as if the coordinator and responsible for the preparation of the plan was the only participating agent, since the actions will depend on each situation, and these vary among the individuals involved.

The second characteristic of PES is that from problems and/or obstacles as a result of the real difference between the reality of a social structure and the longings of an isolated individual, proposed plans are drawn up. In its third characteristic, the PES assumes the uncertainty of the future, and that there is no way to predict it. In this way, the PES will seek to refrain from a deterministic view of the world, in the sense of guessing the future, and will seek possibilities for the actors to interact as the difficulties created. Through the views exposed, pes can be subdivided into four moments: the explanatory one, which seeks to justify the whys of the current situation; the normative, in which what is desired to be done is established; the strategic, which analyzes the feasibility of planned operations; and the operational tactic, which takes care of the implementation of day-to-day operations.

The new National Policy for Technical Assistance and Rural Extension (PNATER) has been seeking the discovery of new methodologies that can meet the reality and needs of individuals in rural areas. However, in order to enable compliance with this policy, there is a need to readapt the methodologies and methods of action for technical assistance and rural extension. Among these methods, we can mention: participatory

methodologies, action research, participant action research, constructivist and humanist pedagogical orientation, holistic and systemic view.

In participatory methodologies, the researcher starts to play a role as a participatory agent effectively, no longer being just the source of information. In addition, this professional should visualize the community itself as a transforming agent and promoter of local development. Action research is a tool for understanding and interacting between researchers and members of the communities surveyed. With this there is a possibility of solving the problems through specific guidelines in the investigation participant action (IAP), the agent who acts in the community is placed as a process advisor, in the survey of local problems, which must go through a process of continuous construction and reconstruction and under the responsibility of the community itself.

The IAP should have a flexible design that should be built throughout the project progressively. In the holistic view, the processes of knowledge acquisition are developed by man through the interaction between the multiple disciplines involved associated with the very relationship of coexistence between the members of the communities.

The systemic approach required by PNATER consists in the analysis not only of the physical insums of production systems, but also in living beings, especially the human factor. In addition, the relationships between these systems and their interactions with the environment should be taken into account. The fundamental importance of this approach lies in the ability of the rural extension professional to understand and interact human relations.

In the constructivist and humanist pedagogical orientation, the educational character governs all the action of PNATER, mainly in the recognition of the farmer as the main agent of transformation in his social relations in the environment to which he belongs.

4 ROLE OF RURAL EXTENSION

The main objective of the extension is to create a chain reaction that results in better living and working conditions for the rural population. As well as incorporating the rural masses, through education, into the development programs of a country, seeking to accelerate the economic and social development of rural areas. It also aims to increase the income of the farmer, besides serving as a bridge between agricultural research and rural producers.

5 NATIONAL POLICY FOR TECHNICAL ASSISTANCE AND RURAL EXTENSION (PNATER)

Pnater was built in partnership with Ater's governmental and non-governmental organizations and civil society organized and established by the Federal Government in 2003. Guided by the National Program of Technical Assistance and Rural Extension (Pronater). The Pnater was developed based on the principles of sustainable development, including the diversity of categories and activities of family farming, and considering elements such as gender, generation and ethnicity and the role of governmental and non-governmental organizations.

Thus, budget actions were created to meet the differentiated demands of the various sectors of civil society, public institutions of Ater and research, universities, municipal governments, the budget actions that make up the Pronater are appropriate to each type of partnership established: Fomento à Ater promotes the development of partnerships with government agencies, companies and public entities and civil society , allowing the necessary conditions for the provision of Ater services to family farmers.

The training of Ater's agents aims to formulate and coordinate, in partnership with formal and non-formal education organizations, the preparation and publication of information materials, and carrying out initial and advanced training activities, in a continuous way for Ater's agents. While, the promotion of the production of technologies and knowledge appropriate for family farming carries out support for validation projects, testing and availability of technologies that respond to the demands of family farming in different regions of the country, in an articulated way with governmental and non-governmental organizations that work in the area of research and development.

6 COMMUNICATION PROCESS IN RURAL EXTENSION

The word "communication" has its origin in Latin COMMUNICATIO, and its literal translation would be something like "making common", but it was attributed the meaning of "act of sharing, dividing, distributing".

This term is derived from COMMUNIS, which meant "something shared by several, public, general".It is worth mentioning that the communication used in the educational process, even if the various ingredients (principles) are available, that is, students, teachers, books, classes, library, audiovisual resources, etc., it is still not possible to say, with certainty, that students received education. The ingredients are

necessary, but insufficient, and what matters are the dynamic interrelationships between the ingredients, arising during the process.

Communication should also be understood as a process because, although its ingredients can be separated for analysis purposes, the interrelationship between them is one of the most important aspects for the effectiveness of communication. In a simplified way, as defined by Aristotle, the communication process has as ingredients "who speaks", "discourse" and "audience". In a more detailed way, it can be said that the entire communication process implies the existence of the main basic principles, such as: *source, message, encoder, channel, decoder and receiver.*

Source: A person or group of people with any reason to enter a communication process, for example, an individual, a group, or an institution. In the rural extension the source is the extensionist, thus this must possess ability to write, speak, illustrate, demonstrate, argue, discuss, dramatize and uneasing. In addition to knowledge and altitude with respect to the subject, the public and the environment and the sociocultural level, that is, experiences, cultural background, academic training, etc.

Message: it is the way in which the purpose of the source should be expressed, that is, in which the objectives and intentions of the source are converted into a systematic set of symbols, this must occur through code, content and treatment.

Encoder: is the ingredient responsible for encoding the ideas and objectives of the source, expressing them in message form. In interpersonal communication are motor skills, which allow the source to speak, write, gesticulate, etc.

Channel: it is the conductor of the message, which can be, for example, transmitted by air, to be heard, can be printed, to be read, etc. These can present themselves in the form of meanings, means and technicians.

Decoder: Is the element responsible for decrypting the message, so that it can be useful to the receiver. In interpersonal communication, it is sensory skills that allow the receiver to hear, read, understand gestures, etc.

Receiver: it is the target of communication, and may consist of a person or group of people to whom communication is addressed. It is important that the audience has the ability to read, listen, interpret, associate, discuss, dramatize and uneasit.

These principles are essential to the communication process and, from the moment we recognize them, we can enumerate several situations in which the communication process is frustrated, such as in the cases of: lack of a correct definition of objectives by the source; error of the objective, and consequent inappropriate or mistaken message;

inability to encode the message, for reasons such as language, social classes, level of education, culture, etc.; inability to decrypt the message due to language issues, social classes, level of education, culture, etc.; channel deficiency, etc.

If there is an objective to communicate and a response to be obtained, the communicator expects his communication to be as faithful as possible, and that he will achieve the desired effect. This is not always achieved due to the presence of noise. By definition, noises are the factors that, acting on each of the ingredients of communication, can reduce their fidelity. In this sense, there are some factors, present in the source, receiver, message and channel, that have a significant impact on communication fidelity. These factors are presented below.

Source condificator - there are at least four types of factors associated with the source that can increase the fidelity of communication: its communicative skills; their attitudes; their level of knowledge; and its position in the sociocultural system.

The communication skills of the source, such as writing, word and thought or reasoning, have a great impact on the fidelity of communication, since they directly interfere with the source's ability to define its objectives and encode them into an appropriate message. Thus, communicative skills, attitudes, level of knowledge and position in the sociocultural system are factors that should be taken into account in the communication process, since they affect the behavior of the source and its efficiency when communicating its objectives to other people.

7 LEARNING PROCESS IN RURAL EXTENSION

Being one of the purposes of communication, and rural extension in particular, to influence behavior, to provoke changes in habits, it is necessary to understand the variables and processes that determine behavior and its change. To understand the learning process of a given behavior, it is necessary to define the concepts of stimulus and response.

Stimulus can be understood as anything that the individual can receive through one of the senses, which produces sensation in the human organism. Anything that this individual does as a result of the perception of the stimulus consists of a response, which is nothing more than the individual's reaction to the stimulus.

It can be said that the learning process consists of the following ingredients: presentation of the stimulus, perception of the stimulus by the organism, interpretation of the stimulus, experimental response to the stimulus, perception of the consequences of

the experimental response, reinterpretation of the consequences and preparation of new responses and the creation of a stable stimulus-response relationship: the habit. According to Freire, the principles of teaching and learning go together, that is, teaching does not exist, without learning it, learning does not exist, without teaching it, who teaches, learns by teaching, who learns, teaches when learning. Therefore, knowing how to do, is knowing how to be, teaching to do, is making being. He concludes that learning is not accumulating knowledge, because what is not overcome is the ability to learn always. So that we only learn when what is the object of knowledge has meaning in our life, so we have to learn from concrete experiences, the important thing is to learn to think.

That's why teaching it requires respect for the knowledge of the students. Knowledge is first and foremost a historical-social production, it is an ongoing process. It's not enough to be an instructor, you have to be an educator. Typically human characteristics, not present since the birth of the individual, result from the interaction of man and his sociocultural environment. When the human being transforms his environment to meet his basic needs, he becomes himself.

8 METHODS AND MEANS OF COMMUNICATION USED IN RURAL EXTENSION

The emphasis of rural extension methodologies in the 1950s and 1970s was based on technology transfer, with little emphasis on grouping and the participation of beneficiaries, both in the preparation and execution of projects. Methodology can be defined as the study and systematization of methods adaptable to the work of Rural Extension, while methods is the way of teaching and/or the teaching process.

In the old years extension methods were used to achieve the adoption of new technologies. Over the decades, there has been a significant change in strategies. Currently, the opinions and the point of view of the beneficiary groups, the so-called participatory methodology in rural extension, is taken into account in the survey of information: Extensionist/consultant/technical assistant and farmers who are protagonists of a transformative action. In which extensionists have the role of mediators of the process of change of farmers and family farmers the subjects of their own development.

The classical instruments of Technical Assistance and Rural Extension - ATER are added other concepts, many of them based on the theories and methodologies of popular education, seeking to reach the dimensions of greater dialogue with social groups, respecting the differences between them. This methodology has as main objective for

extensionists: the experience of a methodological process based on the principles of participation; participatory planning and discussion in the exchange of the actors' knowledge; assembly and implementation of strategies for sustainable rural development.

It should be noted that the current moment is characterized by the approximation of civil society to the public authorities, beginning the process of: consolidation of management councils; creation of public spaces for discussion, formulation and implementation of public policy management and growth of social movements strengthening against social inequalities.

But there are still some challenges, as we live a tangle of conflicting and often contradictory relationships. In this context, the rural extension, guiding its practice in an educational process, which provides for social inclusion, needs: Respect appropriation of knowledge by farmers and family farmers. Extensionists investing in the development of critical awareness and the ability of social actors to conceive and articulate their own project.

To meet these challenges, extensionist action works: educational practice that has in social organization its starting point; use of participatory techniques of: planning; implementation; organisational forms of producers. This participatory process of planning and intervention is what allows farmers, their families and other social actors to face and seek a solution to their problems. Thus, the Rural Extension, to better communicate with its public, especially the rural family has developed, adapted and has been using a series of communication methods. Thus, in communication and Rural Extension, the extension is necessary to know, select to plan and use correctly the methods and means and depending on the public of the objectives and the subject to be transmitted.

9 THE CHOICE OF TEACHING METHODS IN THE EXTENSION

The essential mission of the rural outgoing institution is to create situations within which people develop educationally and as citizens. This development is an active process on the part of the beneficiary. Therefore, it is essential that the serviced public is interested in what is on the agenda, placing their mental strength, physical effort and involvement.

People learn, become aware and discover their own way better in different ways: some listening, seeing and or doing and others through discussion. Different teaching and extension methods are more effective in certain situations, at different stages of the

development process, such as diagnosis, prioritization, planning, execution, adoption or evaluation. Moreover, it is worth mentioning that people do not learn at the same speed.

It is likely that some farmers are in a certain stage of experimentation of a new practice and wanting to know the details of how to do, while others are only initially interested. For these reasons, in certain situations, the use of a variety of teaching methods is more effective than others. In their work routine, the rural extensionist evaluates the best working method, according to the objectives outlined and the local reality. Generally, the most complex methods, both classic and participatory, are the ones that lead to the most positive results. Other times, it is the simplest method that produces the best results.

It is up to the technician, analyzing the public, the objectives, the available resources, the type of message and the methods, to decide for the best or most appropriate methodology to be used. For this there is a significant diversity of methods. And there are means of communication that enable the results to be achieved in the fastest and most effective way.

The methods of rural extension, the techniques of dynamicization, the media, educational publications and the actions of the social groups may have the most different classification and organization. However, one of the prerequisites of good extension work is the extension is the extensionist's ability to select and combine teaching methods appropriately.

The orientation is that the extensionist, in a participatory way with the communities, make a previous diagnosis, elaborate a community work plan and establish the methodological strategy, determining the actions to be developed to achieve the desired objectives.

9.1 CLASSIFICATION OF METHODS

The methods used in the extension can be classified into individual, group, or mass methods.

INDIVIDUAL METHODS are those that aim to serve people individually, although they are of smaller scope, are important for the extension is important for the extension is in the knowledge that must acquire from the community and in the trust, which can gain from leaders and rural public, besides being of great efficiency in learning. Learning is an individual process. Although extension agents should use mass and group methods to reach large numbers of people and encourage joint action in project planning and execution, personal contacts serve many essential purposes.

The personal influence of the extensionist is vital to ensure cooperation, participation in extension activities, in the adoption of improvements in property and at home. People will listen to the advice and suggestions of an extension ist of whom they know, like and whom they respect for technical knowledge. Individual methods also allow, through the exchange of ideas with producers, to know the conditions of rural populations and communities themselves. We must, however, remember that individual methods have very high costs, so their use should be quite objective. It is important to point out that this method directly affects isolated individuals in each action and are important to know the local rural reality, but it has to be planned, becoming expensive. They are, *contact, visit, observation unit and interview.*

- Contact is an unplanned method, which occurs in unforeseen situations and in different locations, whether at the head office, in the office or in the field, in which the technician exchanges information and clarifications with the public related to the work of ATER. The audience reached in the contacts is quite diverse, and can be formed of people directly, or indirectly, to the work plan.
- Visit is an important method of extension, which provides a personal means of communication between the rural family and the extensionist, in an environment where they can discuss matters and exchange information in privacy, without distractions and interruptions. This involves a planned action, aiming at the execution of the programming of the ATER work.
- Observation unit is a method used to observe the behavior of certain innovations and disseminate them, later, provided they have technical, economic and social feasibility. It consists of allocating a certain area, provided by a collaborating farmer, for the implementation of a certain technology or practice, for observation. Its objective is to experience, under local conditions, the feasibility of introducing one or more practices not yet employed in the area. For this reason, it requires a detailed record of all information, to enable the measurement of technical and economic results associated with the practice under observation.
- Interview is a method performed in the office, head office and field, in which the extensionist aims to know situations and facts, identify problems, and evaluate the work. It should be planned with all care and well conducted. Meanwhile, semi-structured interviews are an interview that is guided by 10 to 15 key questions previously determined. This tool facilitates an open environment of dialogue and

allows the interviewed person to express themselves freely, without the limitations created by a questioning. The semi-structured interview can be conducted with leading or prestigious people in the localities.

GROUP METHODS are those methods that aim to reach groups of people, providing the exchange of ideas between extensionists and the public. The advantage of group methods is to be able to reach, at once, a greater number of people. They are especially effective in advancing early stage farmers of interest to the test/examination stage of a particular technology or orientation. When the group's reaction is favorable, most members can move on to the adoption stage. Farmers react to the extensionist and the ideas expressed by other members of the group. These forces, when stimulated, well planned and executed can lead to changes in practices by a large number of beneficiaries.

Group methods make it possible to exchange experiences and are the ones that provide the lowest costs. They also facilitate the discovery of community leaders, the organization of producers and the development of people, through discussions, demonstrations and information. They have greater scope, by reaching groups of people, exchange of experiences and solutions of common problems, stimulates participation and rural organization, requires planning: course, excursion, walk, field day, meeting with information, meeting with demonstration, technical meeting; practical meeting with Method Demonstration (DM) or Technique (DT); conference; convention or meeting; forum; panel; lecture or lecture; seminar; Symposium. The most important ones will be defined below.

• **Meetings** is a planned working method, carried out with an audience that has common interests and objectives. It has the purpose of introducing or improving techniques; transmit information to a large number of people at the same time; plan the work; provide an exchange of knowledge and experiences; promoting community organisation; and/or motivate the public to be worked on.

Meetings can be distinguished by the number of people involved and according to their objective. There is **a technical meeting** that aims to transmit knowledge and motivate changes in habits and attitudes, being developed by the technician with the help of audiovisual resources. In a technical meeting we will be able to use techniques of dynamic and it will be up to the technician to select the most appropriate form for the subject, depending on their objectives and the public that will participate in the event.

There is a practical meeting with some technical demonstration of the subject at hand. This is a type of meeting that aims to transmit knowledge and skills development,

giving the beneficiaries of the action the condition of "learning to do, doing". Practical meetings aim, among others: to introduce unknown practices; or improve the use of existing practices in the workplace.

The meeting can also be with emphasis on the dynamic and articulation of the working group. It is a type of meeting, through which the extensionist seeks to stimulate the creativity of a group of people, to identify problems and needs, seeking solutions and decision-making for action, including, necessarily, the exchange of information and debates.

- Demonstration of Technique or Method promotes the proper development of a technique known and proven by the research, given in objective form by the extension agent or technician specially prepared, for a group of people, in order to develop skills and skills, seeking that the beneficiaries of action "learn how to do doing".
- Conference is a planned, formal meeting, with expected periodicity, in which, in a single session, a lecturer presents a specific theme to an audience with common interests.
- Convention or Meeting is a meeting involving a large group of people, who meet to discuss common issues of interest, using combinations of other methods such as lecture, forum and panel for one or more days. It is used to explore or try solutions to a problem or decide on a line of action.
- Forum is a method in which an expert talks about a previously determined subject, followed by discussion, where those present can participate. It is commonly used when one has a problem, which should be explored by the audience, or to update recent reports and analyses, interpretations of facts and clarifications regarding points of controversy.
- Panel is a method in which 4 to 8 people, knowledgeable about a subject, discuss informally, under the direction of a coordinator, in front of an auditorium, presenting their points of view. The panel helps the audience analyze the various aspects of a problem, as panelists are usually deep aware of the topic under discussion, and often present antagonistic views. The panel does not have the purpose of reaching the solution to the matter, although it may lead to conclusions leading to a solution. The most appropriate subjects for this technique are those

of common interest, matters of controversy and those in which the development of ideas is opportune.

- Lecture is a method in which the speaker talks about a carefully elaborated and previously determined subject, before a group of people. The lecture is used to present information, in order to clarify points of controversy, inform and analyze facts, explore facets of a problem.
- Seminar is a planned method of active learning, in which a group of people meets in previously scheduled sessions, to study a topic of common interest, in search of problem solving, under the direction of a coordinator. It is used to enable the deepening of discussions around the problem and to achieve greater objectivity in the conclusions. The theme of the seminar can be divided into parts or subthemes. The division should be made according to the work objectives of the promoting organization and the existing problems on the subject, which should be clarified and solved during the development of the activity.
- Symposium is a method in which, a group of experts, or deep connoisseurs of a subject, under the direction of a coordinator, presents to an audience a series of brief lectures, in a sequence of different aspects of the same problem. The duration of the symposium can be one or several days, according to the chosen theme. This allows an exploration of ideas in a systematic, relatively complete and uninterrupted way. The symposium should be used when it is desired to present basic information on a given subject, when there is no need for interaction between participants; and whether you want to provide information directly and informally.
- Excursion - consists of a method in which the extensionist accompanies a group of people with common interests to regions where certain activities or practices are successfully developed. Its goal is to show "on site" the development and results associated with one or more practices. The tour, too, should not be practiced in isolation, but as part of a combination of other methods, aiming to complement the learning process of farmers. For example, the tour can be part of a course, in which practices are theoretically addressed. The conduct of farmers to a locality where these practices were carried out or are being developed, through a tour, allows them to visualize their advantages at the field level, which can be a decisive factor for the adoption of these practices. Some of the main

advantages of the tour is that it strengthens the relationship between participants, allows the visualization of the development of "on-site" practices, in addition to motivating and expanding the experience of the participants.

• Course by definition, the course is a method that addresses knowledge of a predominantly theoretical nature, with specific programming, covering other teaching methods and resources, targeting a certain group of people with common interests. In this respect, the course differs completely from the training that, by nature, seeks to address practical issues. This aims to enable the target audience a certain degree of theoretical knowledge and level the group's understanding in order to develop, through a combination of methods, a strategy of action in the community. The course is, therefore, an appropriate method for situations in which one wishes, in a period of time, to train, improve or specialize a homogeneous group on a series of practical and technical information on a subject. The course may also involve other methods, such as result demonstration, tour, meeting, etc.

As main advantages, the course optimizes the extensionist's time, contributes to level knowledge, facilitating extensionist action, enables more people to be able to train in a short time and facilitates learning by exchanging information and experiences. On the other hand, the difficulties related to the programming of the time and the time more accessible to the participants, the uneven knowledge of the participants and the need to move farmers from their environment are the main limitations of this method.

- Field day is a method that gathers a large number of farmers in a property, where good results have already been obtained in certain practices, in order to disclose them to a larger number of people. The practices in question should refer to a single subject, for which one wishes to arouse the interest of the public, without the concern to teach how to do. It usually brings together farmers, technicians and authorities, and should be used to disseminate the extensionist work. Therefore, it is necessary that the property chosen to perform this method be worked by the rural extension.

In addition to disseminating the performance of rural extension in a given region, expanding and strengthening the relationship between the team of extensionists and producers, the field day has the advantage of arousing the interest and attention of a greater number of people for a given issue, all in a single day. In addition, this method makes it possible to demonstrate live the results already obtained and presents relatively low costs, considering its scope in terms of number of producers. The main disadvantages

of the method is that it requires time from the preparation team and requires a property with good results in the technologies disseminated and worked by extensionists.

- Task force is a group method, generally used in the community of farmers, in which a group of people gather to develop one or more actions for the benefit of the community. Its purpose is, therefore, to add efforts in order to achieve a common benefit. As an extension method, the task force should be used in conjunction with other methods. As advantages, the task force promotes community integration, provides solutions to problems that would hardly be solved individually and provides conditions for the development of leaders and initiatives. Its main limitation is that it requires ability to manage a larger group of people and maintain the spirit of collaboration.
- Competition this method consists in the establishment of a constructive and educational competition, in which farmers will compete with each other for the best results in a given activity. Its objective is to measure comparatively the results of the actions that the producers have carried out in order to promote the increase of productivity and the economic return of their activities. A very common example of this practice is the dairy tender, usually held in municipal agricultural exhibitions.

One of the advantages of the competition is that, through it, extensionists can measure the levels of productivity achieved in the locality, and compare them with other regions. In addition, it reaches a large number of people, has stimulating effect, showing and motivating in practice the results of the adoption of technological innovations. However, one of the limitations associated with this method is that it can generate personal competition, which can be quite pernicious when it comes to small family farmers, for whom cooperation, not competition, is the most important survival strategy. In addition, this method requires a lot of involvement and responsibility of the extension team and, however smoothly conducted, it can generate doubts about its results.

• Exhibition is a method that allows the simultaneous use of means of communication, allowing the use of two important factors for the memorization of teaching, which are the repetition of the idea and the visualization of the message. It is based on the exhibition of products, materials, handicrafts, etc., taking information of a technical or educational nature, seeking to motivate the public to make decisions in relation to certain subjects.

In the exhibition, various other extension methods can be employed, such as campaign, week, field day, special day, etc. The exhibitions are used to present and disseminate works carried out by the extension together with farmers. They are also characterized as an event that promotes the rural environment, showing, for the urban public, various aspects related to agricultural activity and farmers' culture. The agricultural exhibitions, which usually stand out as one of the most important annual festivities of the municipalities of the interior, are the most evident example of the use of this extension method. It is important to note that exhibitions are not always an initiative of the rural extension service. The important thing is that, even in these situations, extensionists can take advantage of the exposure performed for the purpose of disseminating their work and achieving other objectives.

Some of the main advantages of this method is that it is massive, reaching a large number of people, and facilitates the introduction of new practices and ideas to a wider audience. However, it is a very complex method, which requires a suitable place for realization, and requires dedication and commitment from the whole team. Moreover, not always what is displayed in the exhibition corresponds to the local reality or is within reach of all farmers.

Mass media can be extension support tools. They are classified in sound (telephone and radio), writings (newspapers and magazines), audiovisual (television and cinema). In its multiple use constitute multimedia and hypermedia. Multimedia is called the use of various media simultaneously (e.g. radio, television and newspaper) and hypermedia the meeting of various media in a single equipment (e.g. Emater website).

These media aim to reach people en masse, that is, a significant and indeterminate number of people. They do not allow direct contact between the extensionist and his audience, but have a very low unit cost due to the large number of people affected and the speed with which messages reach the public. They lend themselves to stimulate interests, create anxiety and attract attention. The following will be described as mass methods or means: campaign, special week, radio; television; movies; newspaper; specialized article; e-mail; website; worldwide computer network; instant communicator or chat tool, whose main objective is to reach the general public; form public opinion, transmit information, pass on simple techniques, motivate behavior change.

• Special Week is a method that consists of a series of educational activities, covering groups of people with various interests and various locations, with specific programming, for several days or a week. In many cases, weeks turn into periodic events,

and generally annual. The main objectives of special weeks are to involve the community for problem solving, to inform and motivate about activities or practices, and to celebrate social or civic dates. As advantages, this method has a wide reach of the public, makes it possible to disseminate and stimulate the agricultural sector and promotes relationships between authorities, leaders, producers and technicians. However, this is a method that requires the displacement of the team and producers to the event site and, in addition, requires a good relationship with existing authorities and institutions in the area of operation.

• Campaign is a complex method, consisting of the orderly use of various communication techniques and educational activities carried out on a defined theme, during a given period. Its objectives are to focus efforts to raise awareness and involve the community in knowledge and problem solving, and to bring about changes in people's way of thinking, feeling and acting.

The basic principle of support of the campaign, as an extension method, is that "the frequency with which a person receives a new idea decisively influences the adoption of this idea". For this reason, campaigns are always insistent, repetitive, aimed at promoting a change of behavior in a large audience. As examples, vaccination campaigns against foot-and-mouth disease, campaign to combat burning, etc. can be cited.

One of the main advantages of the campaign is that it reaches a large number of people. In addition, it arouses a lot of attention around a particular theme and accelerates the adoption of the behaviors it promotes. On the other hand, this is a method that requires the involvement of several organs and, to be effective, it must involve only a single idea.

- Radio is a mass method that reaches all recipients, even the illiterate, reaching the farthest places where other means of extension cannot reach. Radio is less expensive for both the farmer and the extension programmes, and it is more likely for farmers to capture and assimilate the information.
- Television is a mass audiovisual media par excellence, but can be used in groups of all sizes. The combination of the power of the image with the power of words transmits information with greater force and with greater authenticity. In a television program are used combinations of various visual and audiovisual media, with elements projectable or not. It reaches a high number of farmers with low cost of contacts between informant and farmer. There is a very good susceptibility on the part of farmers to capture and assimilate information.

- Movies or DVD movies in the form of DVD can be used in various circumstances, motivating or complementing the extensionist information, depending on the possibilities of the presenter, audience, place, etc.
- Newspaper both in large cities and in small centers, the newspaper is a great vehicle dissecting facts and things. In small towns, every new newspaper number is a source of precious information. A news story is brief, objective and impersonal information about something that has happened recently, that is happening, or is about to happen. When writing a news story for a newspaper, one leaves the facts, not a personal opinion, thus serving as a basis for the reader to form his own opinion.
- Specialized article is of great use to the extensionist. It can be used to advertise an organization, launch a new idea, or practice advisable. Extensionists often use the specialized article to get farmers to take on new practices. For example, an agronomist can induce a number of producers to adopt soil conservation practices through a series of newspaper articles.
- E-mail or e-mail is a service available on the Internet that allows the sending and receiving of messages as long as connected to a provider, local, regional, state or national. These messages can contain text or images, often in files attached to it. When the recipient reads the message, you can copy the files that were sent to your computer. E-mail to the rural extension service has impressive growth potential, with resources and possibilities superior to traditional correspondence and circular letter.

For internal institutional and interpartner communication is widely used, but still bumps into the little access of farmers to this digital service, because it is necessary to be connected to the Internet to receive and send electronic messages. Reading and answering can be done with the connection off, as long as you have opened and responded to the message with the computer connected to the provider, however a personal computer is critical.

• Video conferencing or teleconferencing are means of transporting signals between the signal generating point of a program and the receiving point. They are structures set up for the production of sounds and images in which a practice, interview or video can be shown in real time for a room or auditorium, with equipment suitable for receiving the signal.

But how to make the internet reach all farmers? To make the Internet known, demonstrations must be brought to rural communities through: 1) seminars and other practical applications; 2) production and distribution of videos that document existing rural Internet initiatives (user testimonies); 3) public demonstrations for development associations and extension services; 4) preparing staff to raise awareness of the Internet in rural regions, through rural Internet pilot services; 5) Internet "mobile units" that can provide mobile demonstrations and facilitate training in remote areas; 6) public declarations of acceptance and promotion of the Internet service for rural communities; and 7) creation of incentive packages to be able to face the risks inherent to the Internet service in remote regions.

10 FINAL CONSIDERATIONS

Therefore, it is considered that there is a need for a new role or posture of rural extension in the face of current needs, and rural extension work should be based on environmentally sustainable development, economically viable and socially just in the quest to adapt a new environment profile. Brazilian countryside. This is because, among other factors, the number of rural workers and families dedicated exclusively to agricultural activities has been decreasing rapidly, and during the 1990s, the number of rural producers / workers who perform non-agricultural activities doubled.

Thus, it can be said that talking about rural extension is talking about education. And to speak of education is to address an important aspect of humanity: transformation. Together, they both manage to build new realities. The classroom is the field, the plantations, the environment where the creations are - in swamps, plateaus, plows, lakes, rivers and streams. The rural extension worker is a development agent that goes to the most distant grottoes and corners of the country.

There are many achievements regarding a rural extension with participatory methodologies, which consider the extension technician as an educator, cultural knowledge and the appreciation of signed commitments, reducing inequalities in favor of sustainable development, however, there is still much to be done until this policy can be consolidated, both in quality and in quantity and accessed, with equity, by family farming in Brazil.

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