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**ORGANIZATION OF PRODUCERS AND THEIR PARTICIPATION  
IN THE PRODUCTIVE AND EQUITABLE DEVELOPMENT  
OF THE AGRICULTURAL AND LIVESTOCK SECTOR**

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## 1. Introduction

According to estimates by the Economic Commission for Latin America and the Caribbean (ECLAC) for 1990, 196 million inhabitants of Latin America live below the poverty line. This represents 45.9% of the total population. The percentage is even more striking when the rural situation is examined.

These data reveal the profound lack of equity in our societies. When basic needs are not met, people are disadvantaged from the very start of life in terms of their potential for social mobility.

The orientation of the productive apparatus and the ways in which the surplus generated by economic activity is appropriated, creates conditions in which poverty becomes increasingly severe and widespread.

In this context, the international agencies linked with the United Nations system, and the World Bank and the Inter-American Development Bank in particular, have worked jointly with the countries of the Region to promote social policies aimed at strengthening strategies that "simultaneously seek economic growth and the deliberate and efficient transformation of the opportunities generated by this growth into increasing levels of well-being for the entire population, with special emphasis on the poorest sectors" (1).

Furthermore, the foundations of the policies established in the 1940s, a period in which the State was seen as the principal regulator of economic and social activities, have more recently been re-examined.

The fiscal deficit, together with the inefficient use of resources, contributed to the discrediting of certain public activities and to periodic surges in inflation, leading to speculation and problems in economic planning for investment and spending.

These changes weakened the capacity of the public services to respond to problems in the various sectors, the function for which the services were created. One consequence of this situation was a scaling back of resources, which affected both the work of veterinary care providers and the morale of the social sectors linked to livestock raising. Nevertheless, in some regions steps were taken to develop a capability for analyzing and understanding the livestock and animal health situation at the local level, and existing resources were identified and coordinated to provide veterinary care services. This created the possibility of a more effective response to the problems of animal production.

Proposals have been formulated for the technical and administrative reorientation of veterinary care. The strengthening of local health activities, together with the development of community participation and intersectoral coordination at the local level, have been viewed as instruments for improving the effectiveness of the assistance and the efficiency of management (9).

Additionally, this reorganization seeks to promote the development of agricultural activity based on principles of equity. The implementation of local modalities of veterinary care can thus be seen as a comprehensive proposal for reorganizing the model of animal health care.

In particular, activities aimed at treating animal health problems in areas dominated by small producers can help ensure the survival of the most depressed rural communities and begin to recover some capacity for growth and for changing production patterns in these areas.

In this regard, the building of a more equitable social development model implies the need to pursue several goals related to veterinary care services, namely:

- To promote health by offering cooperation for livestock development in the family farm sector, with a view to increasing family production, consumption, and income, and thereby help to improve public health conditions in the community.
- To promote reform of the sector by pursuing the technical, administrative, and financial decentralization of the official health services. These processes should be aimed at integrating producers through the local veterinary care systems, facilitating local decision-making and incorporating intersectoral activities in a concrete and dynamic way. The ultimate goal is to impact favorably not only on animal health but also on the quality of life of the human population.
- To promote health based on the concept that animal health programs are a bridge between agriculture and public health. Intensifying activities among small livestock producers can help create conditions that favor increased animal production and improved nutrition for individuals and families. Building ties between agriculture and health is essential to the effort to mobilize prompt and effective responses to many public health problems (6).
- To promote environmental protection and development aimed at improving the profiles of animal production among medium and small producers by encouraging integrated and diversified forms of production that are compatible with the conservation of natural resources and the protection of the food supply.

- To support the control of animal diseases that affect livestock production and public health, since it is the rural populations involved in livestock production that are at greatest risk of contracting occupational illnesses related to zoonotic diseases and to diseases transmitted through the biological or chemical contamination of food.

## **2. Participation of Producers in Animal Husbandry Development through Veterinary Care Systems**

Veterinary care fulfills specific policies by carrying out activities and services that are organized in accordance with the global guidelines and strategies drafted by each country in the context of its productive and social systems.

As a social strategy, it offers diverse possibilities for action related to animal health. Each model of veterinary care produces specific services that yield different results, evaluated with respect to: the adaptation of service delivery to different animal populations with differing health profiles; the effectiveness of the actions in dealing with the problems of livestock health and production that are specific to each animal population; the socioeconomic efficiency of animal health services, in terms of the utilization of available resources; the extent of community participation in relating the production of services to the real health needs of the human and livestock populations; and the relevance to national objectives and specific public health aims.

Veterinary care articulates the following components: an institutional structure with a general capacity to provide services; technology for the production of specific activities; a set of programs; a relationship between the provision of animal health services and that part of the livestock sector being served and the agencies involved in animal health and other relevant actors; a set of rules that establish mechanisms for financing, for training and utilization of human resources, and for service delivery; a political agenda that provides direction; and a capacity for adapting to changing situations.

Differences in the role, hierarchy, and relations among these components in the configuration of an animal health care system distinguish the different models of care. These models represent different ways of organizing the various entities that provide care in an area devoted to livestock production.

Constraints on spending for veterinary care by the official services pose a challenge for their operation and management. Systematization of the work of the veterinary services requires that activities be carried out with attention to the potential for intersectoral action with other areas of livestock development such as credit for

livestock raising, schools, and universities, and scientific, technical, agricultural, and health institutions. Such intersectoral action facilitates the control of animal diseases.

Currently, political decisions to eliminate certain animal diseases as part of the development process are placing new demands on veterinary care systems. These require not only additional resources, but also qualitative changes in the way the systems of care are organized and operate.

Recent experiences in countries of the Region confirm the benefits of strengthening the technical and administrative infrastructure at the local level.

### 3. Veterinary Care at the Local Level

On the basis of these structures, actions are carried out to achieve specific results effectively and efficiently. The impact on the animal population is measured through the use of epidemiological and production indicators that give a picture of animal health conditions. A series of closely related elements pertaining to the organization of veterinary care networks is examined. The analysis is of great importance in determining the shape of local units of care. Based on the epidemiological method, this process makes it possible to expand the response capability and to solve the problems in a given locality.

Veterinary care activities, organized systematically at the local level, address the priority problems of the human population and/or the animal population in a given locality and respond to the priority needs of human groups and their animal populations.

The building of a capability for programming, management, and operation does not depend solely upon the operating capacity of the unit. The extent of decentralization in each country is fundamental because, among other things, it largely determines the potential flow of resources from the central level to complement those generated locally.

This organizational modality is grounded in the following general principles (6,11):

- Administrative decentralization and micro-regionalization, viewed as elements that influence and strengthen the development of local units of care, enable decision-making and management to take place at the level where the problems occur and where they can be solved most effectively (2).
- Community participation is another element of great importance for the development of local systems of veterinary care and should be conceived as a process of reciprocal responsibilities between the human population and the

veterinary services. In this regard, steps should be taken to evaluate the role of the various social actors in the locality and the scenarios for encounters and dialogue concerning a plan or program for veterinary care. The actors, their power, the possible conflicts and alliances, and the appropriate mechanisms in each local scenario are decisive in determining the real viability of programs at this level.

- The development of intersectoral relations is of great importance to local veterinary care services. Relations between the health sector and agriculture, education (including universities), trade, specific industries, political entities, and other sectors are basic to the effort to build effective integrated action that translates into improved health conditions for the human population and greater productivity of the animal population.
- Strengthening of administrative and financial capacity at the local level is also key. Achieving complete coverage of local veterinary care with maximum effectiveness and efficiency, within the social, economic, and political context of the specific locality, depends to a large extent on operating capacity and hence, on the capacity for programming and management of veterinary care activities.

In this context of local administration, management is understood to mean the process through which "a cooperative group of people" direct their actions toward achieving common objectives in terms of solving certain problems or needs related to animal health, with optimal utilization of available resources.

The task of management at the local level consists of three areas. Planning involves making decisions about future courses of action. It means deciding beforehand what to do, how to do it, when to do it, and who should do it. Execution is the process whereby management implements the decisions that have been made. It includes the activities of organization, direction, communication, and resource management. Finally, control corresponds to the monitoring and evaluation of activities and orientations, with corrective intervention in order to achieve results as close as possible to what was expected or planned.

There is a need to change the traditional methods of generating, distributing, and evaluating financial resources in light of the specific risks as well as the programs of national interest. The aim is to ensure that resources respond to the real needs of the livestock sectors at the local level and are applied with maximum flexibility and efficiency. The use of alternative sources of local financing and their administration at the community level has generally improved the effectiveness of health action. Among their positive effects, these processes have the potential, already demonstrated in several

contexts, to apply the same organizational structure and application of resources to solving priority problems in public health.

In short, local veterinary care promotes intersectoral activities, the integration of other sectors, and the active participation of the livestock sector (producers, private veterinarians,) and it mobilizes resources available in the community, all with a view to ensuring the continuity, effectiveness, and efficiency of its actions.

In addition, local care systems have proven highly effective in conserving the environment, especially in regions where small producers predominate and where institutional structures promote extensive participation and the application of appropriate technologies.

#### 4. Family Production

Family farming in Latin America presents diverse characteristics stemming from varied historical and social circumstances related to both pre-Columbian cultures and subsequent colonization processes.

The terms used to describe family producers cover a range of situations. They include *minifundistas*, peasant farmers, small producers, family producers, settlers, sharecroppers, and others. Despite their differences, however, these social sectors all have certain features in common, notably a scarcity of resources—land and capital—and the use of family labor.

Areas of significant differences include the rate of technological innovation and adoption of new technologies, the level of productivity, and income levels. There are also differences in the levels of formal, nonformal, and informal education, as well as in access to institutional credit (11,5).

These differences exist among countries, among regions within a country, and within a single region. The image of a uniformly poor peasant agriculture, technologically backward, illiterate, isolated from markets, and without access to government services, does not always conform to the reality of these countries.

Family farms are distributed throughout the Region and include vast areas of livestock production. They are important as a source of supply for the domestic market, and because they engage a very large number of families dependent on agricultural activity (13). In Ecuador, for example, an estimated 2 million rural *minifundistas* produce between 41% and 63% of the supply of 10 basic foods in the family diet (10).

As mentioned above, the number of poor in Latin America's agricultural sector has increased since 1970 and now accounts for two-thirds of the rural population—approximately 126 million people—according to estimates by the Food and



Agriculture Organization of the United Nations. A study by ECLAC and the United Nations Development Program (UNDP) estimates that the absolute number of poor people increased by 89 million between 1980 and 1989 (3).

Small producers tend to optimize their earnings, and they orient their production mainly toward their own consumption or domestic consumption, although there is a minority that produces with the goal of maximizing profits and is able to make use of more advanced technologies.

Small-scale livestock production organized around the family unit, to the extent that it succeeds in increasing productivity and income, leads to a greater supply of food and resources for families (7,12).

The rural family is both a unit of production and a unit of consumption. A significant portion of its production is devoted to household consumption, and the remainder to commerce. Thus, decisions about production and consumption are taken simultaneously.

In this context, it is difficult to establish a clear distinction between domestic and productive activities. Basically, domestic production involves producing a series of products for direct consumption by the family to meet part of its needs, whereas productive activity generates a surplus over and above household consumption that is used in the procurement of other goods to ensure the continuity of the productive unit.

The family as a unit of production is linked to the market for goods through its surplus, and in this way is incorporated into a commercial cycle governed by economic laws that respond to the logic of commercial economies. It is also linked to the labor market to the extent that the family labor force is not utilized in the rural productive unit and must seek work outside that unit.

In order to understand the economic behavior of family units, it is useful to establish a rationale concerning the objectives they pursue and that guide their actions. Since the economic rationale of a unit emerges as a response to the context in which it operates, describing this context is essential for understanding the uncertainty that the family unit must face in production and trade. Dependent upon resources that are poor in quantity and quality, the rural family unit adopts behavior characterized by risk aversion. That is, it seeks to minimize risk-taking, choosing to sacrifice a small increase in its average income to avoid the possibility of a major loss.

This rationale of minimizing risks implies that the family unit tries to ensure a minimum level of income. Given its poverty, the rural family is not in a position to jeopardize its survival by embarking on high-risk activities.

Its production is diversified and not specialized. An empirical consequence of the tendency toward risk aversion is that the unit manages a diversified set of activities and, hence, resources.

These economies display serious weakness in terms of their scattered, fragmented, and diversified production and the need to sell this production rapidly— sometimes even before it is harvested—in order to continue with the productive cycle. To these problems must be added the almost nonexistent organization of producers to defend their interests.

Another consequence is that the response of the family unit to changes in economic incentives is neither clear nor immediate.

Under conditions of uncertainty, decisions are made on the basis of expectations. New economic incentives can modify these expectations, but that takes time. Because agricultural and livestock production cycles are usually long, evidence that new incentives present an advantage normally has to continue for several years in order to change expectations (7,8).

Risk aversion explains why the adoption of technologies created outside the *campesino* economy is slow, gradual, and depends upon initial experimentation by a small group of producers. Larger groups may then apply and adapt the technology with varying degrees of intensity according to the changes in productivity they observe in the first group of users.

This process of innovation affects the unit costs of production, since producers incur expenses in the phases of information-gathering, experimentation, and adoption. Their ability to make these investments is limited by a lack of credit, insurance, inputs, transportation, and extension services in the rural environment (7,8). Moreover, the very slowness of incorporation creates costs for producers in the process of adopting new technologies. The costs of experimentation and information significantly increase the unit costs of production.

With regard to the technologies themselves, it should be pointed out that in most cases they have not been designed for these economies, which is one of the greatest obstacles to development. Thus, producers are often unaware of arguments in support of greater profitability or increased yields and cost/benefit ratios.

When the family production system is analyzed, the various monetary components can be distinguished (income from the sale of goods, expenditures for productive processes, and household expenditures). To these are added the non-monetary components (basically production for household consumption and work performed that is not related to livestock production).

These non-monetary components are part of the economic strategy of this type of producer. They are important not only because of their relative contribution to total income, but because they permit and ensure the continuity of the family farm operation.

## 5. Animal Health Profile in Family Production

Small-scale livestock production is characterized by the following main features:

- Current revenues, utilized for the daily support of the family nucleus, come from the sale of products generated by livestock activity (milk, eggs, wool, poultry, guinea pigs.) Occasional income is produced by the sale of larger animals or agricultural products and from seasonal wages earned in urban employment, usually by the head of the household. In recent years, there has been a marked change in this situation, with income from female labor accounting for a greater share, as jobs have become more available in labor-intensive agroindustry.
- The structure of production is characterized by the predominance of small properties; poor-quality lands; small bovine herds existing alongside other animal species; comprehensive and diversified use of production (meat, milk, fertilizer, animals for farm labor); some connection with small-scale processing of outputs (textiles, milk, meat); limited or nonexistent technology (mechanical, chemical, or biological); and abundant family labor. Genetically, the stock bred is basically *criollo* or hybrid, adapted to the conditions under which it is handled and to the characteristics of its environment.
- Notwithstanding the limited or nonexistent investment of fixed capital, the traditional management practices, and the inadequate natural resources that constrain the productive process, some indicators of rural livestock production reflect a certain degree of productive efficiency. These include the high animal load and the high milk and meat yields per unit of surface area. However, other indicators are less favorable, such as the interval between breeding, the average age at first delivery, the production of cow's milk per day.
- In these economics, animal production and animal health are critically limited, owing to the lack of forage for the feeding of livestock, a problem that is addressed by letting the animals graze freely for part of each day along local roads and in gorges, irrigation ditches, or by feeding them a seasonal supply of by-products generated from agricultural harvests (corn husks and cobs, wheat and barley chaff, sugarcane.) This leaves the animals susceptible to nutritional, deficiency, and parasitic diseases that limit their productive potential. Owing to the conditions in which the animals are handled, there is a high risk of transmission of zoonotic diseases to the family nucleus (rabies, brucellosis,

tuberculosis, hydatidosis, taeniasis/cysticercosis)—diseases that are partially incorporated into the programs of primary health care.

- Another of the fundamental constraints that hinder animal production in rural economies is the lack of infrastructure for the processing, storage, transportation, marketing, and distribution of animal products. As a consequence, a system of "middlemen" absorbs a significant portion of the eventual profits.
- In most rural production units, there is evidence of adequate crop rotation and measures to conserve and protect the soil (Andean Area). However, in certain areas, rural settlement has resulted in deforestation and environmental degradation (Central America).
- Available technologies in most cases do not meet the needs of family economies, which partially explains the resistance to their adoption.
- The allocation of material, human, and financial resources is not usually carried out effectively. In most cases, there are problems gaining access to official channels for the reporting and registration of vesicular and other communicable diseases that can eventually affect the animal population, with drastic results.

Family economies of the same strategic nature but with closer market ties, are found in predominantly livestock areas such as those in the Saltado River Basin of Argentina, in Jají in the State of Mérida in Venezuela, in some parts of southern Brazil, and in Uruguay. These present a somewhat different picture. For example, in the area of Cacharí, which is dominated by family production, it has been observed that (4,9):

Inasmuch as animal husbandry is the principal commercial activity, most income is earned through the sale of calves. So-called nonlivestock income (not derived from production) basically comes from the collection of retirement pensions and from jobs performed outside the family unit, which can be temporary or permanent and may or may not be related to agricultural and livestock activity.

Employment on large commercial ranches is common; this situation reflects articulation with other types of production and, as such, aids the functioning of the system. Both types survive because they can articulate with one another.

Although subsistence production remains an important strategy within the family economy, this tendency has been in marked decline in recent years, a fact that reflects the growing incorporation of these economies into the market and, thus, an increasing trend toward the sale, rather than the consumption, of production.

From the standpoint of the quality of the available natural resources, it is important to point out that in the Pampas, in Jají, southern Brazil, and Uruguay, there

is no major imbalance between the resources available to the family economy and to commercial production. This is seldom the case in the rest of Latin America, where there has been a steady marginalization of family production toward the poorest-quality lands.

In general, it can be said that these systems of production are relatively sustainable, since they have survived over time without depleting natural resources to any great extent. However, growing incorporation into the market has placed the continued survival of these economies in serious jeopardy. Moreover, in forested areas with the potential for exploitation, the continual displacement of these small producers into areas not incorporated into the productive system, leads to the degradation and depletion of the natural resources as the agricultural frontier advances.

Some production is above the average level for the area and is similar to that of other more capitalized types of production; the cattle population on these ranches consists of animals bred specifically for production.

The animal health profile is affected mainly by reproductive and parasitic diseases, with the latter type of disease often fostered by flooding and the stagnation of waters. Outbreaks of vesicular diseases are sporadic.

The low income of small producers does not allow for investment and makes it necessary for them to perform some labor off their holdings, a phenomenon associated with rural depopulation and the aging of the rural population. Production and marketing are hindered by, among other things, poor roads and limited access to credit; meanwhile producers are subject to a high tax burden. There is a marked lack of health coverage for small producers.

These two general portrayals reflect the variety of problems small producers face in Latin America and, accordingly, the diversity of the lines of action that must be pursued in order to achieve active participation by small producers in efforts aimed at improving their standards of living.

These efforts must be promoted from the central levels, since some of them are fundamental to overall national policies (e.g., information systems and epidemiological surveillance of human and animal health).

## **6. Small Producers and the Problems of Health and Production**

With regard to animal health care, it is clear that small producers systematically adopt recommended technologies selectively. This renders such practices inefficient, affecting the productivity of the herds.

Increases in productivity and, hence, producers' incomes, are associated in varying degrees with the treatment of typical health problems such as malnutrition, ecto- and endoparasites, brucellosis, reproductive disorders, trichomoniasis, vibriosis, and leptospirosis, to name a few of the most significant.

However, there is evidence that the projects implemented to date have not been based on an understanding of the specific needs of small producers, because they have not taken into account the views of these producers regarding proposals to improve their living conditions.

One of the characteristics of technological development in the rural environment is that innovations come from outside the rural economy. Rural people can be innovators in the sense of adopting and adapting technologies, but not by generating their own innovations. This suggests a need to try to eliminate the dependency of rural economies on exogenous innovations by promoting the development of local technologies. This in turn implies transforming the passive rural dweller into a key actor in the creation of innovations; and it also implies changing the current relationship between the rural work force, agricultural extension services, and agricultural research (7).

In this regard, it is understood that every community has the potential to define its own problems and needs through a mutual and reciprocal learning process and that the success of any action decided upon will require the involvement, from the start, of all the sectors concerned—that is, from the definition of a problem through the formulation of a diagnosis to the identification of alternatives for solving the problem.

The full participation of the family economy in the analysis of its own situation promotes a transformation process that will benefit everyone involved. In this respect, "participation" is defined not only as the right to receive information and to be able to express opinions, but also the right to intervene in the decision-making process.

The capacity to identify problems and priorities comes from knowledge of the specific conditions under which these livestock concerns operate. That knowledge should be based on the producers' own perceptions of their actual needs. Actions should aim at addressing those priorities in order to respond to the problems identified by the community, which in turn will allow for progress in defining an animal health and public health profile.

## **7. Small Producers and Animal Health Programs**

For this reason, any steps to improve animal health and public health must plan for the presence and participation of the small producers, which will of necessity be tied

to public and private veterinary services, so that cooperation can be provided in areas of importance to this sector of livestock producers by means of different strategies.

This process of participation is crucial to the viability of animal health programs.

The areas where decentralization and community participation have had the greatest impact are the areas in which the most significant progress has been made with regard to animal health objectives. This is particularly the case with regard to the plan for the eradication of foot-and-mouth disease in Argentina, where large, medium, and especially small producers have maintained an active participation.

Animal health programs should be part of a livestock development process that uses the producers' own perspectives on the problems and their suggestions for solutions as the point of departure. This is a prerequisite for the equitable growth of rural areas.

The participatory approach rests on a series of premises that involve a rethinking of local capacities: that is, the empowerment of a community through the identification of solutions to its own problems and its contribution to implementing the solutions; the work of the local health service, with the local veterinarian being in most cases a promoter and supporter of the proposal; speed, flexibility, and skill in the diagnostic process; and the presence of an interdisciplinary group of professionals who can offer techniques suited to the priorities of small producers and detect problems that will constitute lines of research in their respective disciplines. Without a doubt, a proposal of this nature requires professionals wholly committed to its goals.

The viability of this type of participatory undertaking is conditioned, on the one hand, by the real participation of the producers, and on the other by the commitment and determination of public and private institutions, both national and international, to promote, lead, and finance the material and human resources needed to carry out the activities contained in the approach.

Proposals of this type are longstanding in Latin America. Nonetheless, the long time frame involved in the development and implementation of this approach means that efforts to date have not yielded much fruit, in part because of obstacles associated with: (a) the need for continuity over time; (b) an inadequate and, in many cases, nonexistent technical base; (c) short-term political decisions, and (d) the high mobility of the technicians who execute these projects.

Indeed, these constraints should be taken into account from the start of implementation, with a view to mitigating their adverse effects. Although a participatory process does not guarantee a perfect understanding of the reality, it does make it possible to define with greater precision the problems of greatest importance to the community.

It facilitates interaction and brings theoretical interpretations to bear on the problems, rendering more effective the intervention of institutions, professionals, organizations, and producers.

## 8. Conclusions

Changes in the role of the State and the growing activism of the private sector are the principal incentives for the participation of producers in agricultural and livestock development programs and especially in animal health programs. The general problems of small producers involve such diverse areas as land tenure, livestock production, nutrition, environmental health, education, marketing, financial credit, access to technical assistance, problems of technological innovation, and schemes for rural community organization.

The participation of producers in local activities related to animal health problems has yielded some encouraging results. However, the challenge remains to turn these limited successes into a broader impact that benefits family production as a whole. Small producers have such wide-ranging and complex public health and animal health problems that certain livestock ailments, viewed in isolation, may not be perceived as cause for concern. Examples of such ailments are chronic disorders such as nutritional, deficiency, and parasitic diseases that affect animal production and productivity, and certain acute but sporadic infectious and contagious diseases, such as foot-and-mouth disease.

The identification and definition of actions on the part of small producers and the health services, in accordance with priorities, will aim at obtaining results that justify the confidence of the producers and sustain their willingness to engage in campaigns that respond to general lines of action, including preservation and control as well as the eradication of disease and an improvement in bioproduction indicators.

In addition, it is a great challenge for veterinary care systems, especially at the local level, to build upon the effort and interest surrounding the treatment of animal diseases in order to place greater emphasis on strengthening local health systems and deepen the awareness that real and lasting development depends basically on the application of technology that prevents environmental degradation. This will be the contribution of greatest importance to the urgent task of achieving agricultural and livestock development with equity.



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