



Typology of subjectivities in relation to grass management

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Abstract

In Uruguay, most cattle and sheep herds graze on natural grasslands. Research indicates that overgrazing is widespread. As part of the Grassland Management (GM) extension project, research is being developed to identify the different ways in which ranchers think about what they understand by GM. This set of different ways is called a typology of subjectivities. From these differences, five ways of thinking about GM emerge.

They are, 1- from the whole (which is associated with rotational grazing and implies considering cattle and sheep herds, soil, pasture and human resources), 2- from the grass, 3- from measurement, 4- from visual observation and 5- from the body condition of cattle herds. Based on similarities, it is possible to generate two macro-groups that facilitate analysis. The proactive rational macro-group (groups the whole, the grass and measurement) and the reactive rational macro-group (groups visual observation and body condition). Each macro-group has its ontological dimension (what to look at?), epistemological dimension (relationship between the rancher and their reality) and methodological dimension (how to look?). The average GM subjectivity profile for all the cases analysed (26 farms) prioritizes the whole or grass view and rejects visual observation (which implies that they prefer to measure).

One of the advances of this project is the identification of methodological views in each macro-group. These views are the gateway for technical assistance and rural extension (TARE). This means that TARE must work orienting their strategies according to each macro group rationality. From which it is deduced that it would not be correct to emphasize measurement and not work with the more traditional producers who focus on the visual observation (as suggested by the traditional theory of rural extension).

Introduction

In Uruguay, most cattle and sheep herds graze on natural grasslands (Pereira Machín, 2011) Research indicates widespread overgrazing (Paruelo et al., 2000). As part of the GM extension project, research is being conducted to identify the different ways in which farmers think about and understand GM. The project, launched in 2021, seeks to improve grassland management by identifying good practices that promote sustainable systems (Fiore et al., 2020). As stated by Freire (1973) it is difficult to change a person if you do not know how that person thinks and how they interpret their reality. By understanding how they

think, learning strategies can be properly designed to fit their needs, values, and practices. This study analyses the subjectivities regarding GM of 26 ranchers.

Methods

A qualitative methodology was used, based on structured interviews with 26 ranchers, analysing their perceptions regarding GM. The establishments were chosen in the following way: a public call was made to participate in the project, and those that, according to the technicians' knowledge and/or consultations, were doing interesting things from a pasture management point of view were selected. The interviews included questions about grazing dynamics, livestock management, and emergency response.

Regarding grazing dynamics, the questionnaire questions referred to: what they look at to manage pasture, what stocking rate they use, whether they implement occupations and rest periods, criteria they use to make decisions, whether they know their stocking rate, how they plan grazing, whether they have specialized areas according to species (sheep and cattle), how they conduct field visits to make decisions.

Regarding livestock management: whether they have specialized areas according to species (sheep and cattle), whether they manage fixed lots, whether they supplement or not, whether they use improvements or not, which categories they use them with, etc.

Regarding emergencies: questions were asked about which emergencies they faced, with emphasis on the measures taken during droughts, especially.

The responses were analysed qualitatively, interpreting them to identify emerging themes that allowed for the establishment of differences.

Results

Five types of subjectivities were found regarding GM:

- **Prioritizes the whole:** A systemic vision related to rotational grazing that considers technical and human elements (Cros et al., 2004).
- **Prioritizes the grass:** Prioritizes grassland management as the basis of sustainability, emphasizing that "grass makes grass" (Bove, 2023).
- **Prioritizes measurement:** Uses indicators such as the Food Plate Index (FPI), a simple but robust forage budget, for data-driven decision-making (Duarte et al., 2021).
- **Prioritizes observation:** Based on the visual interpretation of grass and animals through a "trained eye" (Segarra Ciprés and Bou Llosar, 2004).
- **Prioritizes the body condition of the animals:** This is the traditional view that values accumulated experience as the main guide (Morales et al. 2005).

The following are representative statements of each of these types of subjectivity:

"Grass management involves taking into account the system, which includes the grass, the animals, the soil, and the human factor". (prioritizes the whole)

"The first step is to assess the grass: the grass itself creates more grass". (prioritizes the grass)

“If you cannot measure, you cannot manage”. (prioritizes the measurement)

“The eye measures by observing and makes good estimations” (prioritizes the observation)

“The first step is to observe the body condition of the cattle.” (prioritizes the body condition)

Discussion

The five approaches can be grouped into two broad groups that we call "rational-proactive" and "rational-reactive." We believe this is an appropriate approach due to the conviction that within each macro-group there are similarities, exchange dynamics, and grey areas that make it advisable to work with the broad groups, not with the isolated types. The name respects the original classification of the Instituto Plan Agropecuario (proactive and reactive), emphasizing that both approaches are rational.

This classification highlights the epistemological dimension (the relationship between the producer and "their" reality: proactive or reactive), which is linked to the ontological dimension (what to look at in reality: the grass or the livestock). The novelty is that this research incorporates the associated methodological dimension (how to look: measuring or observing). This dimension is important because it gives value to the fact that there are not only "objective" forms of knowledge through measurement, but also through observation (all rationales). But also, it should be said that it is through these methodological views that TARE services express their intervention strategies.

The "rational-proactive" comprises three related visions: those who look at the whole (practice rotational grazing), those who look at the grassland, and those who measure. The three views focus on the grass with nuances. Those who practice rotational grazing have a global vision (not just plants). Those who focus on grass and those who emphasize measurement share common core values: grass makes grass, and without measurement it is impossible to manage it. It is likely that those who practice rotational grazing also share them. Those who measure use numbers, records, and instruments such as the green folder, the FPI (they are likely to be younger and with more women presence).

The "rational-reactive" macro-group comprises two related views: those who use visual observation and those who look at the body condition of the animal. We could say that both aspects characterize the traditional livestock producer. Those who observe visually prioritize the experience that accustoms the eye to "see well."

Intervention strategies must consider the two major rational logics described above. For the "rational proactive" macro-group, the intervention strategy must work with instruments such as the green folder, or the FPI. The numbers speak for themselves and can be the basis for moving towards scaling proposals. For the "rational reactive" macro-group, the proposals must be adapted to the cultural specificities of the group. The numbers must be accompanied by images that speak for themselves and the systematization of experiences that are illustrative.

In both cases, two considerations apply. First, the rancher workshop/group is an appropriate tool that constitutes the innovative core of a process that then poses the challenge of achieving scalability, what was previously called dissemination. And the challenge arises because much of the learning that occurs at the "workshop/group" level is the result of interactions and experiences that cannot be scaled on their own. Second, technical messages should seek to integrate the productive, economic, and environmental aspects. It can be difficult for the producer to understand them separately, especially the environmental aspects (Vanclay, 2004). The environmental dimension tends to be an integral concern in the rational proactive,

while in the rational reactive it refers more to the economic dimension (that the company continues to generate income and work).

Conclusions

The study identifies the existing subjectivities in relation to the way producers manage grass. Recognizing these subjectivities is key to designing effective interventions. The study identifies five different ways of understanding pasture management, which can be grouped into two main types: rational proactive and rational reactive. This characterization respects previous work carried out by the Instituto Plan Agropecuario. The innovative contribution of this research is in two aspects. First, it allows us to better understand the heterogeneity that exists within each typology (the different perspectives). Second, it allows associating a methodological perspective with each typology. This gives the research an applied character. That is, it guides us to specify the intervention strategies in better terms.

By prioritizing the rational character of the two typologies, it follows that the central idea from the TARE services should not be to promote the transition from visual observation to measurement. Rather, we must work with all producers, adapting the materials to cultural specificities when necessary. Traditionally, ATER theory suggests working with the most receptive (in this case, the rational proactive typology) and waiting for natural diffusion (scaling) to occur. Here we propose, to accelerate changes, to work with everyone, which implies recognizing the different subjectivities. We know it is a challenge: it is easy to say but difficult to apply.

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