

Enhancing the Impact of Research for Development: A Pilot Competitive Grants Program to support innovative partnerships and projects

Concept Note

I. Contact Information

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Organization description and date established	CGIAR Center with mandate to conduct agricultural research in the dry areas, with inclusion of small ruminant and forage production research. Created in 1976

II. Project Details

Title of Proposal	Framework for valuation of llama products and production systems, and improvement of farm incomes in the marginalized highlands of Bolivia and Argentina
Duration with grant funds	24 months
Implementation countries	Argentina and Bolivia

III. Primary CGIAR Center Partner

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IV. Other Partners

Name 1st partner	Promotion and Research of Andean Products (PROINPA)
<i>Type of Organization</i>	Non profit private foundation
<i>Name of Partner</i>	Antonio Gandarillas
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Name 2nd partner	Forage Research Center (CIF) and Forage Seed Company (SEFO)
<i>Type of Organization</i>	Decentralized research units of the University of Cochabamba
<i>Name of Partner</i>	Ruddy Meneses (CIF) and Gastón Sauma (SEFO-SAM)
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Name 3rd partner	National Institute for Agricultural and livestock Technology of Argentina, Bariloche and Catamarca centers (INTA -Bariloche and INTA -Catamarca)

<i>Type of Organization</i>	National agricultural research center
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V. Project Questions

1. Problem Definition:

Challenge The challenge of this work is to develop a methodological framework for valuation of llama production and production systems in marginalized highland areas, to improve income and market participation of resource-poor producers. This framework will target three key fronts: (i) linking production with the market chain with due consideration of market opportunities and institutional arrangements and policies, (ii) maintaining the genetic integrity and diversity of indigenous animal species by appropriate management of genetic resources; identifying their special attributes and often undervalued qualities, and (iii) maintaining the integrity of the native vegetation - the sole feed base in current production systems, by promoting appropriate range grazing management practices. This framework will be sufficiently flexible to be applied in production contexts where livestock production is undervalued and constrained by similar conditions, e.g., areas with high poverty levels and migration, and eventually reverse these conditions by improving the livelihoods of marginalized people.

Significance and problem causes The project will focus on llama production systems in economically depressed areas in the highlands of Ayopaya Province, Cochabamba in Bolivia, and Catamarca Province in Argentina. These areas are severely constrained by water scarcity, extended periods of drought and cold, with frosts that could occur any time in the year, severely limiting crop production. Llama and criollo sheep-based production is often the main income source and means of subsistence: in Ayopaya alone, an estimated 1000 families rely on llama production. In Ayopaya the area harbors a remarkable llama ecotype, with higher fleece weights, finer fibers, and heavier liveweights than other llama populations. No information is yet available of the qualities of Catamarca llamas. Nevertheless, these qualities have been, by and large, undervalued. Market opportunities have expanded, but llama producers from these regions have little or no access to markets. In such a situation, there is a clear need for a framework for valuation of current production systems to facilitate improvement in income and market participation.

Disconnected from markets, production of llama -based systems does not benefit farmers beyond the subsistence level. Furthermore, undervalued llama products, sold at low prices, do not offer incentives for technological change. These factors are reflected in the low and stagnant production levels and economic depression, despite the expanding market opportunities for animal products.

The central thesis in this approach is that valuation of products and production systems, leading to higher income and market participation, can break production stagnation and catalyze the economic improvement of these depressed areas. Subsequently, the cross-synthesis of the generated information could provide the basis for the outscaling of this methodology to benefit other farmers out of the estimated 60,000 llama -based production systems of Bolivia and Argentina.

2. Objectives:

Global objective To develop a methodological framework for valuation of llama production and production systems in the highlands of Bolivia and Argentina to improve income and market participation of resource-poor producers.

Specific objectives

- i. To identify market opportunities and constraints for llama products from the highlands of Cochabamba and Catamarca, in order to orient policies and interventions for production improvement
- ii. To assess whether the existing policy environment is conducive to market participation and production valuation; and identify and promote appropriate policies as needed
- iii. To promote the valuation of products and production systems through mechanisms that will facilitate business transactions and interaction of producers with other stakeholders, including the private sector and policy makers
- iv. To measure and quantify technically, the special attributes of the llama populations of Ayopaya's and Catamarca's highlands and use community-based methods to secure the integrity of this genetic diversity while allowing farmers to access improved animals

- v. To secure the integrity of the rangelands through appropriate, community-based grazing practices that will reduce or halt environmental degradation while allowing animals to have an enhanced feed base to express their genetic potentials
- vi. To promote south-south collaboration and synergies for problem-solving approaches, improve institutional capacity and conduct cross-site synthesis

3. Project Implementation:

Specific steps/activities to be followed in correspondence with the proposed objectives

- i. Inventory and discussion with the community and stakeholders, of existing policies that support production of camelids; and eventually, design of policies that could reach local and national policy makers, to achieve effective change and production promotion
- ii. A quick but sound analysis of local, national and international markets for llama fibers and meat. The available information on fiber and meat quality on this population will be synthesized and a gap analysis conducted to identify additional fiber quality and meat sensory analysis needed to confirm and characterize the peculiar attributes of these populations
- iii. Establishing fairs where communities could display their products and the project could promote awareness of valuation methodologies. These events will serve as platforms for business transactions among different stakeholders: producers, processors and traders, as well as local and national governments and policy makers. Each event will prominently feature a public discussion on policies and special arrangements needed to create an enabling environment for change. The fairs will take place both in Cochabamba and Catamarca Cities and in the associated communities
- iv. Setting the most appropriate conditions for management of these genetic resources; preventing crossbreeding with alpaca recently introduced in the area of Ayopaya, using a decentralized, participatory, genetic improvement plan owned and managed by the community. The plan should be flexible, with breeding goals compatible with the goals and implementation capabilities of the community. This plan, based on the principles of genetic improvement, will capitalize the expertise of the various project partners
- v. Identifying, jointly with the community, appropriate methods to manage the native vegetation and suitable forages, to enhance the feed base to allow animals to express their genetic potential. This could potentially include seed production and fodder improvement interventions, building on the consortium's expertise in these areas
- vi. Conducting intense south-south collaboration and exchange and capacity building, by participation in inception and planning workshops, a methodological workshop, targeted short-term training of scientists in key issues either in the region or ICARDA, and in cross-site analysis

Partnership and implementation arrangements The project will be implemented by a strategic alliance formed with Bolivian civil and entrepreneurial organizations, INTA- Argentina and ICARDA. It will be implemented at two community-based research sites located in Ayopaya and Catamarca, respectively, using participatory tools in all activities. The project will build on local knowledge with incremental knowledge when required capitalizing the expertise of all institutions.

Project status The project is new and the idea has not been tested in area of llama production in Bolivia and Argentina – however some elements of the proposal, in particular those involving participatory breeding and grazing management, were successfully tested in Syria by ICARDA with dairy sheep producers; and in Patagonia and Neuquén, Argentina, by INTA with sheep and goat producers.

4. Innovation:

The idea is innovative and challenging. It targets the development of a framework to link three components: linkages between markets and the production chain, integrity of the animal genetic resources, with a focus on analysis and valuation of special attributes; and sustainable use of the feed-base. The application of this strategy is new to livestock production in the llama production regions of Bolivia and Argentina, which has largely been neglected by research and development.

5. Relevance and Innovativeness of Partnership:

PROINPA will lead the implementation in the highlands of Ayopaya, coordinate the community-based research, coordinate the institutional setting, conduct policy inventory and market studies, and catalyze the needed interactions among stakeholders.

CIF will lead the range and forage studies, mobilizing its knowledge base. **SEFO-SAM** (Forage Seed Company), a decentralized enterprise also under the University of Cochabamba that successfully engages resource-poor seed producers, will provide key entry points in seed production.

INTA-Catamarca and INTA-Bariloche will lead the implementation of the Catamarca site, coordinate community-based research and institutional setting, conduct policy inventory and market studies, and catalyze interactions among stakeholders. In the two research sites, INTA will also contribute to the valuation and participatory breeding activities, the design of charts to assess range carrying capacity as a basis for appropriate management plans, and capacity building.

ICARDA will lead and coordinate the project's regional component providing a methodological framework to be followed, the discussions among all partners, interactions between the socioeconomic and range/forage studies, and capacity building. It will also play along with INTA a leading role in implementation of the valuation aspects and the participatory breeding plan.

A steering committee with participation by the main partners, including farmers' representatives, will be established to oversee the project. The committee will ensure transparency and full participation, with the mandate to approve workplans and reports, and approve workplan changes when appropriate. Workplans will be drawn in participatory workshops involving all participant institutions and farmers, where knowledge will be shared and decisions reached after open discussion.

6. Expected Results:

Expected results in correspondence with proposed activities include:

Expected results	Measurement of results
1.1 Policies concerning camelid production inventoried and discussed by farmers and stakeholders, and recommendations drawn	Synthesis document by mid Year 2
1.2 Policies needed identified, designed and proposed to policy makers	Drafts on existing and needed policies produced by mid Year 2
2.1 Market for llama products at local and international scale assessed, gap analysis conducted and recommendations drawn to orient actions based on market opportunities	Document on markets written by early Year 2
2.1 Product attributes of llamas assessed in both sites	Written document by mid Year 2
3. Fairs for discussion and promotion of means to improve production and marketing of llama products conducted at both sites with the involvement of policy makers at local and national level	Number of fairs conducted in the production area and in the cities of Cochabamba and Catamarca
4. A decentralized, community-based, participatory llama breeding plan established	A breeding scheme operational in both sites with the participation of at least 20 farmers
5.1 Most suitable forages to enhance the feed base produced	At least 3 promising forages for the region introduced by end Year 2
5.2 Suitable communal range management established	Easy-to-read charts for assessing condition of range for grazing by end Year 2
6.1 Institutional capacity improved	Proceedings of two planning workshops and a workshop for methodologies; at least 6 scientists trained in specific research issues; and reports of at least 5 supervision visits for specific tasks
6.2 Synthesis discussion and analysis conducted, methodological framework developed and impact assessment indicators identified	Document available by end Year 2 Proposal for impact assessment written by year 2 and submitted to donors to allow monitoring of changes beyond the project

All these results will contribute ultimately to income improvement and poverty alleviation. Result 6 is expected to contribute an International Public Good: a methodology with potential to promote technological change in similar production contexts elsewhere in the countries and the region.

7. Replicability:

The framework could potentially be applied to different areas in the Andean highlands of Argentina, Bolivia, Peru and Chile, where production conditions are similar. The project could be scaled up by development projects as it will provide specific entry points for development.

8. Sustainability:

Characteristics that will ensure sustainability: Community-based and participatory approach, reflecting the needs, priorities and capabilities of the community; sustainable breeding plan to be managed by the community; promotion of needed policies that, if implemented, will allow effective market participation.

The project beyond the CGIAR grant phase During the initial two-year project phase, mechanisms for building and implementing the concept of payment for technical assistance will be sought in with the support of local provincial governments. This will allow following up and adjustments to be made with the community. The project will also make sure that a proposal for impact assessment after 2 years of project termination will be offered to bilateral funding agencies, including local provincial governments. In Argentina, INTA has long-standing plans for assistance to llama production in the area. SEFO in Bolivia will explore the possibilities of establishing a seed production component that could lead to continuous support from CIF.

VI. Proposed Budget

Item	Proposed budget (in US\$)
Personnel*	112,000
Research supplies and services*	114,000
Equipment*	14,000
Training and knowledge-sharing	54,000
Travel*	22,000
Communication	8,000
General Administrative Expenses*	32,400
TOTAL Project Cost	356,400
Co-Financing and Funding	106,920
GRANT Funding Request	249,480
Details of co-financing	Co-financing sources include the in-kind contribution of: INTA (US\$48,000) PROINPA (US\$37,000), CIF-SEFO (US\$21,920)

* Budget under these items includes both requested funding and co-financing by partners.