

CGIAR Systemwide Livestock Programme

Concept Note

1. Project title: Feed, food and fuel: competition and potential impacts in smallholder crop-livestock-energy farming systems

2. Lead centre and address: CIMMYT, Mexico

3. Collaborating institutions (IARC, NARS, ARI, others) and address

SLP member centres and especially IFPRI, IWMI, ICRISAT, CIAT, IITA, IRRI and ILRI

4. Name and contact details of the Lead Principal Investigator responsible for leading the development of the proposal

John Dixon, CIMMYT, Mexico j.dixon@cgiar.org

5. Names and contact details of principal investigators in lead centre and collaborating institutions

John Dixon, CIMMYT, Mexico
Siwa Msangi, IFPRI, USA
Michael Peters, CIAT, Columbia
Deborah Bossio, IWMI, Sri Lanka
Belum VS Reddy, ICRISAT, India
Robert Abaidoo, IITA, Nigeria
Jagadish Timsina, IRRI, The Philippines
Charles Crissman, CIP, Peru
Mario Herrero, ILRI, Kenya

6. Cost of the Grant (USD, funds requested from the SLP)

US\$70,000 (seventy thousand dollars only)

7. Matching funds to develop the proposal, if any (USD by source)

As determined by the lead and collaborating centres

8. Activities and milestones to develop the research proposal

a) *Indicate in a timeframe the plan and milestones that will be achieved in order to prepare and submit a concept note and/or a full proposal to the identified funding agency.*

B. Summary of the Desk Study that will be developed (title, institutions and investigators as in Section A)

During the review of the SLP strategy, the LPG identified that an important area of research for the SLP would be a desk study on **Feed, food and fuel: competition and potential impacts** which should be completed within one year. The work would entail addressing the trade-offs and benefits between food, feed and fuel for smallholder crop-livestock farmers and the identification of research priorities for the SLP.

Key criteria for the study are:

SLP Terms of Reference for Seed Grants

- Strategic priority for SLP: should help guide the research agenda of the SLP while also providing up-to-date information to the global agricultural R&D community
- 1 year desk study
- Should have as its basis a conceptual framework on how smallholder crop-livestock systems (CLS) evolve
- Needs to identify priority intervention points for coping with change resulting from bio-energy production in different CLS systems and their impacts on poverty alleviation and environmental sustainability
- Should seek to find where synergistic activities between the centres will be of primary importance to deliver products for adapting to changes in CLS resulting from shifts in food, feed and bio-energy production

1. Background/Justification (Max.300 words)

- State the reasons that justify the conduct of the proposed research and the current state of knowledge and gaps.*
- State results of any previous research or consultations (workshop, interviews, surveys, etc) that show that the proposed work responds to a demand by beneficiaries and users of project outputs. If evidence of the demand for the project is not available indicate what activities will be undertaken to ensure that the proposed work is demand-led.*

The world's population is predicted to increase by 50% over the next quarter of a century to reach 9 billion by 2030. During this period, and if the livestock revolution fully materializes in developing countries there is likely to be a rapid increase in demand for livestock products, driven by increasing urbanization and rising incomes (Delgado et al. 1999). What is more, the impacts of a range of driving forces such as the rising cost of energy (particularly fossil fuels), water scarcity, climate change and technological innovations on smallholder crop and livestock production are expected to be substantial. As a result smallholder crop-livestock farming systems will inevitably change impacting upon the relative benefits for smallholder households of food, feed and bio-energy production. A challenge will be to ensure that the resource-poor, crop-livestock smallholders, who currently produce the majority of milk and meat in the tropics, have the capacity to meet the increased demand for milk and meat in the face of the increasing demand for bio-energy. What will be the trade-offs and the benefits for poor farmers and how can the sector intensify food, feed and bio-energy production without compromising household food security, sustainable natural resource management and rural livelihoods?

It was in this context that the CGIAR Systemwide Livestock Programme commissioned the one-year desk study on '**Feed, food and fuel: competition and potential impacts**' to elucidate in a comprehensive manner the potential impacts of the world's changing demands for food, feed and fuel on smallholder crop-livestock systems. The study was to be developed by a multi-disciplinary task force from across the CG centres.

2. Project purpose (Max. 200 words)

State project purpose simply and directly

Identify the impacts of changes in the demands for food, feed and fuel on smallholder crop-livestock systems and inform priority setting and policy making for the SLP, the individual CG centres and the global R&D community thereby ensuring that these institutions develop a dynamic pro-poor R&D agenda.

3. Project outputs

- List the outputs that will be delivered by the project.*

A comprehensive desk study report addressing the project topic

4. Project users and beneficiaries

a) *Identify the users and beneficiaries of the proposed research.*

The R&D community, both international and national, striving to alleviate poverty and environmental degradation through support that will improve the livelihoods of small-scale crop-livestock households

b) *Explain how the project beneficiaries have been or will be targeted.*

Publication electronically and in hard copy of the desk study and through PR and policy briefs

5. Project location

a) *Indicate the countries and agro-ecological zones in which the proposed project will be implemented.*

b) *Explain the criteria to select countries and project sites.*

Global desk study with emphasis on LDCs

6. Research approach and indicative research activities in relation to Outputs (Max. 300 words)

Desk study with simulation modelling and scenario analysis

7. Scientific impact and International Public Goods expected from the project (Max. 200 words)

Strategic lessons on why and how small-scale crop-livestock systems will change over the short, medium and long-term in relation to the trade-offs and benefits of food, feed and fuel and their policy, institutional and technological implications for the R&D community and the global development agenda.

8. Expected impact on beneficiaries (poverty reduction, food security, environmental protection - Max. 250 words)

a) *State, preferably in quantitative terms, what development impact might be achieved in the short or medium term.*

The impacts on poverty reduction, food security and environmental protection are multiple. They arise from a better understanding of the impacts of the trade-offs and benefits from food, feed and fuel on agro-ecosystems and human well-being and the subsequent development of policies and a research agenda that produce pro-poor and pro-environmental food security in rural areas of the developing world.

b) *State what indicators will or can be used to demonstrate impact.*

The key indicator to evaluate impact is the SLP, associated centres and other R&D institution using the results of the study to design coherent research strategies and projects. Funds allocated to key areas of the study are another important indicator.

9. Scaling out strategy (Max. 150 words)

- a) *Describe the strategy, processes and institutional alliances that can or will be used to upscale findings.*

See 4 (b) above

10. Systemwide nature of proposed desk study

- a) *State why this is a systemwide activity and why the SLP is the appropriate mechanism for collaboration and funding*
- b) *State what inter-center and system synergies are expected*

Commissioned study managed by the SLP-LPG

11. Contribution to CGIAR goals (Yes/No and if Yes, how). Refer to System Priorities for CGIAR Research 2005-2015, Science Council Secretariat, December 2005)

- a) *Sustaining biodiversity*
- b) *More and better food through genetic improvement*
- c) *Reducing rural poverty through agricultural diversification and high value commodities*
- d) *Poverty alleviation through sustainable management of water, land and forest resources.*
- e) *Policies and institutional innovations to support sustainable reduction of poverty and hunger*

See ILRI 2009-2011 MTP SLP narrative

12. Approximate cost of project that will be requested from funding agencies (USD)

Full funding from SLP

13. Approximate research matching funds from partner institutions (USD)

To be determined by ILRI and its partner centres.

14. Funding strategy NOT APPLICABLE

- a) *Indicate which major funding agency is being targeted by the seed money period and the amount of funds sought per source.*
- b) *Indicate if official contact with these agencies has been initiated and the outcome of this contact, if any.*
- c) *Explain why this proposed Concept Note has a good chance of success in being turned into a major project proposal.*

15. Specific capabilities of partner institutions and key staff (Max.300 words)

Commissioned study managed by the SLP-LPG

16. References

Appendix 2

SLP Desk Study - Feed, food and fuel: competition and potential impacts

Budget estimate

Item	2008
Personnel	45,000
Services	2,000
Supplies	250
General expenses	250
Workshops	-
Training	-
Equipment	-
Travel	16,500
Publications	6,000
Sub-total	70,000
Overheads	-
Total	70,000

Appendix 3

Summary of actions and milestones for the development of a desk study “**Feed, food and fuel: competition and potential impacts**”

Activity	Individual(s) responsible	Activity description	Due date
1. LPG: Outline of study paper	J Dixon	Preparation of outline of study paper	Nov 30 th 20
2. Workshop: Partial draft paper	J Dixon	Presentation and review of study paper	April 24 th 2
3. Write-shop: Full draft paper	J Dixon	Finalization of full draft paper	Sept 30 th 20
4. External review of paper	SLP Coordination	Review by external panel of full draft paper	Oct 30 th 200
5. Revision of paper	J Dixon	Revision of the full draft paper responding to the external review	Nov 30 th 20
6. Electronic publication	SLP Coordination with J Dixon	Editing and formatting to conform to the ILRI Style Guidelines (review by the Publications Comm.) and posting on SLP website	Dec 15 th 20
7. Hard-copy publication	SLP Coordination with J Dixon	Printing and distribution of hard copy	Jan 30 th 200