

ISPC Assessment of Flagship-3 (Livestock feeds and forages) of the CGIAR Research Program on Livestock Agri-Food System (2017-2022)

1. Summary

Flagship 3 (feeds and forages) of the Livestock CRP aims to increase livestock productivity and reduce environmental impacts by identifying, testing, and delivering superior feed and forage strategies and options. In its September 2016 assessment, the ISPC rated FP3 as weak on the basis of weak track record of delivery at scale; inadequate articulation of its comparative advantage, particularly in relation to the private sector; and lack of detail on research priorities, science outputs, and timelines.

The ISPC's rating of this FP's resubmission is still weak. The FP-level targets have been adjusted, in response to concerns about exaggerated targets. However, the research program is not convincingly aligned with major opportunities in various contexts (dual purpose crops, delivery and market linkages, etc.) and the associated constraints in the forages and feed sector to deliver impact. In the absence of a track record and *ex-ante* evidence, the assumptions underlying the impact pathway are too optimistic. The candid acknowledgement of this lack of evidence (*ex-ante* as well as *ex-post*) on the uptake of research-related feed and forage innovation, and an intent to address this gap is appreciated. However, the balance of efforts on this issue between FP3 and FP5 CoA1, which seems the logical place to locate foresight activities, is not evident. Moreover, the comparative advantage of the CGIAR *vis-à-vis* the private sector and NARS is not convincingly argued.

2. Assessment of CRP response to the ISPC major comments on the FP

Previous ISPC comments (14 Sep 2016)	CRP response/changes proposed	ISPC assessment
1. Weak track record of delivery at scale	<p>The overly optimistic targets acknowledged, and more conservation assumptions on uptake of research outputs and ensuing impact on poverty adopted. Specifically, a 200% spill over effect had been assumed and has been reduced to 50%. One country-level (Pakistan) target was also reduced since there will be limited activities, due to reductions in bilateral funding. Cross-FP effort on foresight and prioritisation will prioritize the improvement of parameters in models that underline these numbers.</p> <p>Acknowledge that evidence on improved forage adoption is scarce. Information is available for LAC (>700k ha adoption of hybrids related to the CRP, and overall estimated on improved forage adoption at 150 mn ha, and 120 mn ha attributable to Brazilian NARS). Proposed targets: 2mn ha by 2022 in LAC, E. Africa and SEA and 600,000 farmers using</p>	<p>At the FP-level targets have been adjusted downward, and there is more clarity on priority countries for research outputs under each CoA. The number of farmers reached and acreage for improved cultivar dissemination, however, has remained the same at the CoA level.</p> <p>Candid acknowledgement of the lack of <i>ex ante</i> as well as <i>ex post</i> evidence on uptake of improved forages is appreciated. It is important to reflect on the reasons for this data / knowledge gap, considering the decades of effort and investments.</p> <p>The emphasis on <i>ex ante</i> assessments (as well as <i>ex post</i>) is appropriate, and using critical assessments of past experience and changing opportunities to revise the theory of change and impact pathways is called for. At the same time, the linkage</p>

	<p>improved forages – this is based on growing interest of private forage and seed sector.</p> <p>Dearth of <i>ex ante</i> assessments is another gap that the FP will address, but existing (even if limited) <i>ex ante</i> assessments indicate huge potential in Africa.</p>	<p>with FP5 and the balance of efforts between FP3 and FP5 is not clear.</p>
<p>2. Comparative advantage vis-a-vis other comparable research and the development of the private sector feed industry is unclear</p>	<p>Sections on ‘rationale and scope’ as well as ‘partnerships’ revised to present arguments on why the CGIAR maintains a clear comparative advantage vis-a-vis the private sector, NARS and other actors, including that a major seed multinational continues to rely on CGIAR for its forage breeding. At the same time, the private sector is a crucial player in dissemination of research outputs – this is highlighted in the rationale and partnership sections as well.</p> <p>Acknowledge that addressing forage and feeds constraints is a delivery issue, and this dimension given priority / prominence in the narrative as well. W1/W2 funds shifted to achieve a better balance between development (CoA 2), targeting (CoA 1), delivery and monitoring uptake (CoA 4).</p>	<p>The increased emphasis on delivery recognizes an acknowledged constraint to new forage/feed solutions having impact. Whether this will enhance the likelihood of success is questionable since the outputs that this FP/CRP focuses on (improved forage varieties) are misaligned with the demand / opportunities for forage and feed solutions in South Asia, South-east Asia and Sub-Saharan Africa. In many areas of these regions, it would appear that the opportunities are in dual purpose crops.</p> <p>The assertion that seed multinationals rely on CGIAR breeding programs for cultivars is insufficient to make a case for investments – there is a paucity of evidence on whether this pathway would lead to significant positive impacts on the CGIAR SLOs. It also raises the question whether public funds should underwrite commercial R&D efforts.</p> <p>The comparative advantage of this effort <i>vis-à-vis</i> the private sector and NARS partners remains unaddressed. From the evidence on uptake presented, partners such as Embrapa have a stronger track record in forage research and delivery than the CGIAR.</p>
<p>3. Lack of detail on research priorities, science outputs and timelines</p>	<p>Sections on ‘rationale and scope’ and ‘science quality’ reworked to show how past experience has shaped priorities, and identifies existing constraints that can be overcome through this CRP/FP’s research. Similarly, changes to COA section showcases a more focussed research agenda, and explicitly defined priorities and outputs that will be achieved.</p> <p>FP focuses mainly on three sub-IDOs: more efficient use of inputs; closed yield gaps; and technologies that reduce women’s labour and energy expenditure</p>	<p>The clarification and implied shift towards food-feed crops is appreciated. The narrative includes some description of past Livestock and Fish CRP work to generate demand scenarios, and domains for selected crops (e.g. maize, sorghum, and cowpea) and geographies to inform decisions on new full-purpose crop cultivars. But, information on lessons from these analyses and the extent of influence on research plans remains unclear.</p> <p>The balance of efforts between ‘fodder’ and ‘feed’ (a much broader concept) is</p>

	<p>developed/disseminated. Acknowledge that the appropriate research focus is on closing livestock yield gap by delivering better feed material and other interventions that enhance animal productivity. Contribution to other sub-IDs (capacity development, environmental issues) is through collaboration with FP4 (environment) and FP5 (LLAFS).</p> <p>Connections and common work with other CRPs, CGIAR Centers and external partners highlighted, including food-feed crops initiative with AFS-CRPs and commodity Centers, and the Biological Nitrification Inhibition (BNI) consortium.</p>	<p>not evident. Superior forages appear to be the focus, and there may be opportunities in the broader feed sector that are being missed. For instance, improving cost-effectiveness of feed innovation, which may not necessarily be delivered through research. This is applicable to South Asia, Southeast Asia and parts of sub-Saharan Africa where opportunities for improved fodder, as acknowledged, are limited.</p>
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3. Characterization of the Flagship

Main strengths	Weaknesses
<p>Potentially high strategic relevance as animal nutrition is a constraint to productivity increases, especially within the targeted smallholder systems. Key sub-sector in livestock-related GHG emissions, potential for sequestration / mitigation outcomes</p>	<p>Absence of track record as well as <i>ex ante evidence</i> – to support the assumptions underlying the impact pathways</p>
<p>Collaboration across the CGIAR on feeds and forages</p>	<p>Comparative advantage <i>vis-à-vis</i> other comparable research and the development of the private sector feed industry is not convincingly argued</p>
	<p>Lack of detail on research priorities and science outputs</p>