

## ***Opportunity for Practice Change (OPC)***

### **Country/region**

Argentina, with regional relevance (Brazil, Mexico)

### **Title**

Coping with the feedlot revolution: Informing policy and practice change to promote integrated manure management (IMM) in Argentinean feedlots

### **Situation analysis OPC**

With a market boom of cash-crop agriculture, modern beef cattle enterprises compete for land with various grain and oilseed crops. Therefore, whereas in the 1990s the vast majority of beef cattle were finished on grass with occasional grain supplementation (Arelovich et al. 2011), feedlot systems today account for an estimated 50% of animals slaughtered, amounting to almost 13 million heads in 2013 alone (Argentinian Feedlot Chamber, AFC, [www.feedlot.com.ar](http://www.feedlot.com.ar)). As a result of this rapid transformation, new and specific regulations have been applied to cope with the dynamic situation. Different feedlot good practice guidelines have been developed by the chamber to improve construction design, and improved animal handling and feeding systems. The new industry regulations have stimulated different environmental research initiatives (Rearte y Pordomingo 2014) of whom some express concerns about manure management and methane emissions in those intensive systems (Hilbert et al. 2006). Although there is incipient feedlot experience on biogas production and use (e.g. Feedlot Combers S.A), unfortunately there is no systematic information on current livestock manure management (LMM) practices and their impacts in the Argentinean feedlot industry. Consequently, policy and industry practices are often formulated in the absence of adequate information.

As identified during the LMM scoping study, access to information and evidence combined with the engagement of stakeholders in dialogue to build common understanding and joint action would significantly aid the development of the much needed innovative approaches and solutions among different stakeholders (producers, AFC, policy decision makers, extension service (INTA, CREA), universities and other research institutions) to the sector's manure problem.

### **Opportunity**

The geographic clustering of beef production that has occurred as a result of the rapid growth of the Argentinian feedlot industry requires urgent adjustment of policy and practice frameworks. The current political pressure to address the potential environmental and climate concerns of these production systems, academic interest in the sector, and the industries wish to optimize the economic returns from its investment in manure management systems, provide an excellent opportunity to inform policy and practice change to promote IMM in Argentinian feedlots.

### **Objective(s) OPC (*what achieved*)**

- Build a multi stakeholder network to create awareness, exchange experiences, and promote IMM in the Argentinian feedlot industry;
- Provide access to relevant IMM information and evidence;

- Assess opportunities in policy and practice change through process-based participatory modelling to provide information for IMM discussion and promotion;
- Explore options to exchange knowledge and experiences at regional and global levels.

### **Target group(s) OPC (*with whom*)**

The direct targets of this OPC are different organizations and agencies at local and national level such as the:

- Argentinian Feedlot Chamber and its members,
- Policy makers and regulators (SENASA, SAyDS, MINAGRI)
- Provincial Environmental Entities (e.g COFEMA members, [www.cofema.gob.ar](http://www.cofema.gob.ar))

### **Method & Activities OPC (*how*)**

In close collaboration with all relevant sector stakeholder, and through the OPC task force the following activities will be implemented under the OPC:

- Stakeholder dialogue process to build an IMM network in the Argentinian feedlot industry
- Implementation of a detailed inventory of available IMM practices of relevance to the Argentinian feedlot industry, building on the LMM scoping exercise;
- Participatory assessment of the environmental, social and economic potential of relevant IMM practices for the Argentinian feedlot industry
- Consensus building on good practice IMM guidelines among broad stakeholder for implementation in the Argentinian feedlot industry

Promotion of options to exchange knowledge and experiences at regional and global levels

### **Implementers (*by whom*)**

Activities under this OPC will be coordinated by a steering taskforce consisting of:

- National University of the Centre of Buenos Aires Province (UNICEN) Faculty of Veterinary Sciences;
- University of Buenos Aires (UBA) Faculty of Agriculture & National Scientific and Technical Research Council (CONICET);
- Argentinian Feedlot Chamber, Environmental Department;
- Tropical Agricultural Research and Higher Education Center (CATIE).

### **(Expected) Results & Impact OPC**

- An actively working and committed IMM stakeholder network;
- A detailed assessment and analysis of available IMM options relevant to the Argentinian feedlot industry;
- Relevant IMM practices participatively assessed on their environmental, social and economic potential for the Argentinian feedlot industry;
- Broad, stakeholder-agreed, good practice & policy guidance for application of IMM in the Argentinian feedlot industry;
- Contribution to IMM knowledge exchange at regional and global levels

Identification and application of appropriate IMM practices in the rapidly expanding Argentinian feedlot industry will have a large impact on the reduction of SLCP emissions related to manure. In

addition, improved manure management can bring important economic and environmental benefits. Recycled nutrients can substitute for mineral fertilizer. Recovered energy reduces greenhouse gas emissions and substitutes for fossil fuel.

### **Risks & Assumptions OPC**

The risks to this OPC are mainly related to the commitment and involvement of key stakeholders. In the case, however, the main stakeholders (the Argentinian Feedlot Chamber and its members) are not only centrally involved in the implementation of all activities, but they are also significant contributor to the implementation costs of the OPC. Moreover, given the policy and practice relevance of the proposed work, commitments received from other relevant stakeholders such as academia and the public sector has been equally high.

### **Added value LMMC**

The proposed OPC will short-circuit the current situation in the Argentinian feedlot industry where policy and practice decision are not informed by appropriate analysis and information. In addition, stakeholder consensus and programme outputs will add value and inform and harmonize ongoing National and Regional policy and program development.

This OPC will help to convert an environmental threat into an opportunity for business innovation, with potential application to a considerable proportion of the Argentinean feedlot industry. The knowledge generation and quantitative data will provide essential insights for awareness creation and the identification of cost effective feedlot manure and slurry management practices.

Assessment of the potential economic, social and environmental impacts of technologies will also allow to estimate and promote the sector's SLCP mitigation potential.

### **Multiplier/Leverage**

Given the dynamics of the Argentinian feedlot industry the results from this OPC have the potential to shape significant ongoing and new investments in its continuing expansion. In addition, the sector's rapid growth has also spurred the revision of existing policy frameworks at regional and national level to support and regulate the industry. The stakeholder-endorsed policy-relevant advice that will be one of the outputs thus has a high potential to inform and shape these revisions.

South America is an important region for the production of beef. With 248M heads of cattle, five of the ten beef exporter countries are located in South America (FAO 2013). The information that will be produced by this OPC, and actively exchanged both at regional and global level, will clearly also be of importance to other beef exporting countries such as Brazil and Mexico, where similar trends are transforming the beef sector.

### **Communication**

Project results will be disseminated by the stakeholder network through monthly electronic newsletters (Argentinian Feedlot Chamber), scientific papers (survey policy & practice), workshop reports (scenarios, policy regulation review), simulation outcomes, and training materials (guidelines).