hand the results from the two samples are evaluate in order to rank the scores and make a comparison, on the other a priority scale among the different aspects of sustainability is set as an input for the next step. Weighting each aspect of sustainability on the basis of the scores assigned by consumers enables a checklist to be set up. The checklist is a self-evaluation tool farmers can use to identify possible practices to adopt in order to improve their own degree of sustainability (learning); to understand how much sustainability is perceived by consumers (accountability); to identify critical points and to try to improve or to check the effects of any change – comparing baseline and follow-up evaluation (decision making); as a communication tool, when both farmers and consumers recognise the logo generated by the system.

#### Results

The whole tool has been tested in a specific study area and some relevant aspects arise: the high degree of detail and specificity charactering the tool answers a lot of the reliability issues but causes limitations to transferability; whereas the planning phase requires specific knowledge and skills, in the evaluation phase the single farmer can work autonomously.

#### **Conclusions**

Looking at future scenarios, in terms of assessment instruments, there is increasing demand for manifold assessment tools able to conciliate relationships among stakeholders. This first attempt could be improved. In particular, through its application in different contexts, the tool could be further tested, strengthened and comparisons made. Conditions for transferability should be identified.

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# A holistic approach is needed to improve the performance of the livestock sector in supporting food security in the French West Indies: an offer from the research institutes

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# Introduction

Animal production in the FWI is in an unfavorable position with a decline in traditional markets and increased demand for imported goods. Such a situation requires the creation of essential conditions for growth of the domestic animal sector in terms of global competition and technological development. This paper focuses on strategies to improve the value of animal and meat products in the FWI. Many criteria must be taken into account to achieve this purpose: i) emergence of standardization in meat quality which includes security may assist response to competiveness; ii) innovative technologies in meat processing are necessary for economic development and have repercussions on the agro-nutritional system, allowing reductions in cost, increases in efficiency of production and provision of greater employment opportunities; iii) typical territorial products contribute to the potential for development of niche sectors and rural areas. In his context strong relationships between food quality and security and sustainable development is needed. The quality of animal products is the result of a combination (Figure 1) of several factors, including traceability for microbiology and chemical safety (tracing and tracking), nutritional value and organoleptic characteristics, utilization (shelf-life, user-friendly, packaging quality), cultural aspects (tradition, area of origin, genuineness) as well as ethical – social aspects (protection of ecosystem, flora, fauna, animal health). Food security is derived from all these factors which is more or less a combination of practices and requirements that aim to guarantee the high quality of a food product. Some tools to guarantee food security must be implemented within the whole animal sector and through any process. Mandatory food traceability allows the reconstruction and following of the different animal feed processing phases. Labeling is the principal and most direct instrument which permits consumers to be aware of the specific characteristics of a food and of its relation to cultural values.

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The multi-scale definition of food quality (Figure 1) needs a holistic approach (Figure 2)



Figure 1 Multi-scale of quality

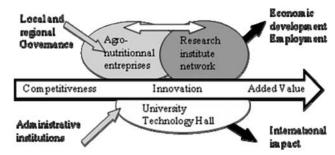


Figure 2 Objectives and actions: pooling of skills

#### Participatory approach

How can one succeed in obtaining the active involvement of different stakeholders in the policy of development process? There is an urgent need to match the goal of producing qualitative food products in the animal sector and the society needs (FAO, 2009). To improve the competitiveness of the animal production sector in the FWI the innovative system will be required to meet increasing added value of animal production and meat products as stated by Santos *et al.* (2006). This approach (participatory situation analysis, characterization of needs/constraints and identification of actions to implement) could be adopted in order to improve both productivity and quality of animal production by improving effectiveness and efficiency of services, farmer awareness and functioning ofprocessers. The main outcomes of the process could be the sensitization of major stakeholders like management team, extension officers and producer members of the unions towards the needs to continuously interact for sustained improvement in both productivity and quality. Another outcome is the realization of established linkages with other organisations from related fields to overcome constraints, in order to have an in-depth understanding of rural animal systems, perception of producers and in choosing appropriate approaches and technologies to overcome the constraints by involving many agents from the whole sector. The participatory approach can aim at stimulating a collective search for solutions, discussions, a future view as well as achieving major shifts in perception of the problem and suggestions its solution.

# Conclusion

The structure of food prices and the socio-economics of households have principle roles in the how and where food is consumed, with price acting against the provision of the nutritional quality of food. Further investigations are needed in this area specifically as economies turned towards more importations of food. In addition education will be of paramount importance.

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