

COSADD: a multidisciplinary research program for sustainable breeding goals and selection criteria

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Summary: To contribute to R&D for selection for societally important traits, the French Program « Agriculture et Développement Durable » and the National Agency for Research funded a 3-year (2007-2009) project "COSADD" managed by geneticists and sociologists from INRA and Technical Institutes. To assess the diversity of stakes, four species, cattle, fish, pig and poultry, are studied as representatives of contrasting meat production systems and breeding schemes. The idea is to provide information for a potential reorientation of breeding goals accounting for social demand. Breeding goals had always been constructed by breeding organizations and geneticists to satisfy breeders' demand. However, a new consensus broadened to include the opinions of members of society must be built when defining sustainable breeding goals. Multidisciplinary research is necessary to provide methodology and information to develop such a consensus that would legitimize the use of animal genetic resources at the society level. A first work package aims at a better understanding of the social building of breeding goals. A second work package should define and rank breeding goals across stakeholders and society. A third work package aims at the definition of new selection criteria in terms of animal welfare or environment. Research is undergoing and findings will be presented in 2009.

COSADD project aims to integrate the three pillars of sustainability - economy, ecology and ethics - in Livestock Breeding Goals and Selection Criteria (BG&SC).

To fulfill such an aim, 19 tasks (T) are realized within four work packages (WP) whose names and coordinators are indicated below.

WP1- P.B. Joly (INRA)

Social building process of BG&SC

T1: methodology
T2: animal welfare
T3: environmental impact
T4: flexibility of breeding schemes

WP0- F. Phocas (INRA)

Scientific animation

T1: critical reflexivity & knowledge management
T2: report on economy and selection states for animal production branches
T3: bibliographic workshops
T4: synthesis of stakeholder interviews
T5: final seminar for breeders' & scientists' communities

WP3- S. Grasteau (INRA)

Defining new selection criteria

T1: cattle docility
T2: fish stress
T3: chicken excretion of minerals
T4: pig excretion of minerals

WP2- A.C. Dockès (Institut de l'Elevage)

Identification of BG&SC and multi-actor hierarchy

T1 to 4: stakeholder interviews
T5: environmental economy
T6: civil society interviews



Clarifying Breeding Goals & Selection Criteria between scientists, stakeholders and society



Elaboration of consensual goals among society and animal production branches



Development of new selection criteria : trait definition, heritability, G x E interactions