

Continuous Stakeholder Feedback: Improving Adoption and User-friendliness of Climate Variability-based Information and Tools for Livestock Production

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Substantial changes must be incorporated into all phases of development of climate-based decision support systems for agriculture to improve end-user adoption. One important aspect required is intense and effective participation and continuous feedback from all stakeholders. We used stakeholder interaction methodologies –originally developed for use in international rural development —to first gauge the need for, then for refining these management products and tools. Working with stakeholders in a learning process involving as many feedback loops as time and budgets allow, is a major concern of our team. We used Sondeos –multidisciplinary rapid appraisals— to get a grasp on the type of producers who might be able to proactively change management in light of climate variability forecasts. We used Extension and farmer visits to first understand cow-calf operations in North Central Florida, and later to calibrate and validate models, through ranchers’ experiential knowledge of climate driven stocking rates in different seasons. Building upon our beef cattle work, a similar methodology was used for dairy production in the Suwannee River Basin, in which herd management and nitrogen (waste) management were also taken into consideration. We improved a dairy farm model by interviewing 21 farmers in a preliminary phase. We continued interaction with the clientele through five focus groups and will validate our models with some six different producers. Individual farms were modeled using dynamic linear programming. We added Markov-Chain cow flow modeling, environmental interaction (nitrate leaching), crop models, and analysis of economic output responding to more complex needs. Stakeholder participation must continue throughout the life of the SECC if objectives are to be soundly and sustainably achieved. The creation of a user friendly, adoptable and adaptable climate variability forecast support system can be enhanced using Sondeos, participatory linear programming, open-ended interviews, and other forms of participatory research and evaluation at all stages.

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