

**Produce Research Priorities Meeting  
June 24, 2010**

**Co-Management: Food Safety and the Environment**

**Summary**

On-farm food safety practices have been implemented by many growers to reduce potential contamination of fresh fruit and vegetable crops by wildlife fecal contamination. Some on-farm food safety practices to reduce wildlife intrusion into production fields may be detrimental to environmental conservation best practices. This session explored conflicts of produce food safety and environmental co-management as well as research to balance these two needs.

**Research Priorities**

I. Epidemiology/Prevalence Surveys

- What other pathogens should we be considering that we are not currently tracking? Are there different risk profiles associated with different wildlife? Are there other major reservoirs of EHEC other than cattle?
- Do we need additional prevalence survey data to determine the impact of food safety interventions on environmental goals? What are the factors that contribute to the fecal contamination among populations of birds?
- How can we relate prevalence to food borne illness outbreaks?
- What are the most important contributing factors in pathogen occurrence in wildlife?
- What are the transport mechanisms from wildlife to produce? Do pathogens move among herds of wild and feral animals and if so, how?
- Are some sites more attractive to wildlife than others? Why? What are the factors that attract birds or other intrusions?
- What are the relative importance of prevalence and level (concentration) of pathogens?
- Do animals going to tail water reservoirs represent a risk of pathogens going onto crops?
- Are we collecting enough samples to effectively detect incidence of pathogens in the environment? How do sampling schemes relate to the prevalence of pathogens in a field?

II. Risk Analysis/Modeling

- What is the probability of a problem? Can we use existing or new data to rank and prioritize risks? How much data is necessary to convince us that an animal species does not represent a risk?

- Are there thresholds for contamination that cause concern? How do we determine thresholds? What is the level beyond which contamination is unacceptable from a public health point of view?
- Can we use quantitative risk assessment to evaluate effect of wildlife on water quality?
- Can we quantify ecological impacts of individual interventions on farms including cumulative effects of many small impacts on habitats?

### III. Management/Best Practices

- How can we balance both wildlife management and non-crop vegetation management? Do we need further research into the tools that we use to evaluate the impact of food safety interventions on habitat?
- Why are animals coming into fields? What might attract them? What might deter them?
- Is it possible to manage birds to reduce the risks associated with birds as vectors of pathogens?
- What are appropriate buffer distances regarding wildlife and domestic animals?
- What are the acute and chronic effects of habitat removal, use of poison bait and other food safety interventions?
- Can vegetated strips and canals be constructed and managed to better sequester pathogens in the environment?
- How long does sediment have to be held before spreading it on fields?
- Can postharvest tools be better used to reduce risks?

### Discussion

- Does research in the central coast represent a unique situation or can it be extrapolated to other regions? What research should be done in regions outside the central coast and how does it differ from central coast research?
- What is happening in terms of habitat damage and why is it happening? Is it due to misunderstanding or misinterpretation? Studies on a landscape scale rather than individual farm scale would be useful.
- Should audits include “not to exceed” statements?
- Establishment of achievable standards that recognize that zero tolerance is difficult to meet is needed. Is there a form of consumer education that can mitigate this issue (understand risks)? What is the role of “strict liability” in farmer co-management practices?
- What specialties (experts) should be involved on research teams to evaluate co-management issues?
- Can USDA better participate in co-management research?