

on the ground that the FSIS inspection program will help keep the hazard they represent at a low level.

FSIS has modeled catfish consumption and hazard concentrations in catfish, the exposure of consumers to the hazards through catfish consumption, the dose-response or levels of concern for the compounds to which consumers are exposed, and the probability of adverse effects or exposure associated with increased risk of adverse effects. The Agency has taken into account whether the catfish were of domestic origin or imported, the specific hazards of interest, and the percent change in the amount of contaminant through handling, storage, and cooking. The Agency has also modeled the probability that a determined fraction of the population would be exposed to hazards in catfish at dose levels exceeding "levels of concern."

FSIS has obtained, as model outputs for one year of catfish consumption in the United States:

- Lifetime cancers (excess cancers in the lifetimes of a population) in the U.S. population, largely attributable to arsenic in catfish
- Mortalities from acute pesticide exposure
- Illness events from Salmonella in catfish

- Exposures to antimicrobials that have been banned for use in food animals (gentian violet, malachite green, nitrofurans).
- Metal exposures (to lead, mercury, etc.) that result in an increase probability of adverse effects

The model outputs in these categories were for farmed catfish defined to include species in the order Siluriformes and for species only in the family Ictaluridae. From the model, FSIS obtained baseline results that assume continuation of the current FDA regulatory regime, and results that represent FSIS continuous inspection incorporating either of two residue sampling approaches: random sampling or risk-based sampling.

Whether or not the Agency used random or risk-based sampling, applying the FSIS program to Siluriformes yielded a reduction of roughly 175,000 lifetime cancers and 0.79 acute toxicities. Using random sampling in the Agency's program yielded a reduction of 91,800,000 exposures to antimicrobials and 23,280,000 heavy metal exposures. Using risk-based sampling yielded a reduction of 95,100,000 exposures to antimicrobials and 23,710,000 metal exposures that constitute a health risk.