Pesticide Research and Monitoring

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PMAC
June 12-13, 2006





Purpose

Overview on health-specific research and monitoring initiatives on pesticides





Canadian Health Measures Survey

- ➤ First ever national bio-monitoring survey 2007-2009
- Health Canada in partnership with Statistics Canada
- Statistically valid nationally-representative bio-monitoring data on exposures to specific environmental chemicals (e.g., lead, mercury, phthalates, selected pesticides).
- ➤ Blood and urine specimens from 5000 Canadians (6-79 years).





NHANES - National Health and Nutrition Examination Survey

- Designed to collect data on health and nutritional status of US population
- Continuous annual surveys since 1999.
- Statistically valid biomonitoring data on exposures to specific environmental chemicals (eg., carbamates, organophosphates, pyrethroids and herbicides)
- Results considered in conjunction with ongoing reevaluation of pesticides





Canadian National Children's Study

- Proposed longitudinal cohort study
- In partnership with U.S. National Children's Study
- Health Canada Working Group
- External advisory group





U.S. Agricultural Health Study

- Tracking health of pesticide applicators (including farmers) and spouses (~ 90,000 individuals)
- Ongoing since mid-1990s
- Participants interviewed every 4-5 years re: health status & pesticide exposures
- Results examined as they are released
- Considered in conjunction with the ongoing re-evaluation of pesticides



U.S. Agricultural Health Study

- Overall cancer rate same or lower than the population in general.
- Preliminary indication that certain nervous system effects in applicators, (tiredness/less alert), may be linked to certain classes of pesticides.



Ontario Farm Family Study

- Health Canada study
- 2000 Ontario farm families particular focus on reproductive health.
- No clear cause-effect relationships between pesticide exposure and reproductive health.
- Additional analysis still underway results are considered in conjunction with the ongoing re-evaluation of pesticides.





Exposure Data Development: Pesticide Handlers & Residential

Purpose:

Develop and update exposure information for use in regulatory risk assessments for pesticides

Members:

PMRA, EPA, California DPR, pesticide manufacturers



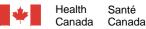


Exposure Data Development: Pesticide Handlers & Residential

Process:

- Design and prioritize exposure studies
- Evaluate and validate data generated
- Data used to estimate and characterize exposures and risk to those who handle or come in contact with pesticides
 - workers, homeowners
 - children contacting treated turf
 - workers harvesting treated crops





Exposure Data Development: Pesticide Handlers & Residential

- Agricultural Re-entry Task Force (worker post-application)
- Agricultural Handlers Exposure Task Force (mixer/loader/applicator)
- Outdoor Residential Exposure Task Force (during & after residential applications, especially turf)
- Antimicrobial Exposure Assessment Task Force (antimicrobial pesticides)
- Residential Joint Venture (survey data on use patterns for residential pesticides)



Regulatory Application

- Improved, updated exposure estimates
 - Increased accuracy
- Refined risk assessments
 - Water monitoring data vs. water modelling
 - Food residue data (CFIA, PDP)
- Validation of current regulatory approach
 - Bio-monitoring results



