

P190 **OCCUPATIONAL PESTICIDE EXPOSURE SURVEILLANCE FOR AGRICULTURE IN CANADA**

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**Objectives** As part of a National Carcinogen Surveillance Project (CAREX Canada), the objective is to conduct surveillance on occupational exposure to agricultural pesticides classified as “possible” carcinogens by the International Agency for Research on Cancer.

**Methods** Region-specific annual agriculture use (AAU) estimates for selected pesticides are derived by multiplying crop

production areas (hectares) from the Interpolated Census of Agriculture (2006) by crop-specific intensity use weights (grams/hectare per year) developed using national and provincial pesticide information. Total AAU (tonnes) is derived for each pesticide as the sum of active ingredient used on all crop types within a subprovincial region. Regional estimates are mapped using a Geographic Information System (GIS). Estimates of potentially exposed Farm Operators are derived by multiplying the provincial average number of Farm Operators per farm (2006 Census of Agriculture) by number of farms suspected to use the pesticide in each region.

**Results** Chlorothalonil AAU estimates were derived for Western provinces: British Columbia (BC), Alberta (AB), Saskatchewan (SK). Regions using chlorothalonil were classified into four 'usage groups' based on AAU (tonnes) quartiles: Low (>0-21), Low-Medium (>21-82), Medium-High (>82-273), High (>273-1597). Map dissemination of estimates identifies high exposure potential regions. Farm Operators potentially exposed to chlorothalonil varied between provinces: BC n=6214; AB n=24 183; SK n=47 020. 'Fruit' and 'vegetable' farms in BC, 'pulse' and 'wheat' farms in AB, and 'pulse' farms in SK were main farm types contributing to these estimates.

**Conclusions** This work provides knowledge on the potential extent of pesticide exposure. Future work will quantify exposure levels for Farm Operators.