2178 Using California Pesticide Information Portal (Cal/PIP) to Assess Use Patterns: Four Applications, with Caveats

C. N. Aldous and P. Leung. *Pesticide Regul., Cal-EPA, Sacramento, CA.*

The 2012 Cal/PIP use patterns for mosquito control indicate best practices. Control techniques and agents used in California reflect two key patterns: larvicides predominate over adulticides, and very few treatments rely on acetylcholine (AChE) inhibitors. Water treatments include (as highest to lowest frequency) Bacillus-based microbials > juvenile hormone growth regulators H surface film agents > spinosad (synthetic analog of bacterial insecticide). One AChE inhibitor still used in water bodies in 2012 was temephos. Adult treatments were mainly ultra-low volume (ULV) treatments with pyrethroids and natural pyrethrins. Year 2012 citrus crop treatments were mostly recent-generation pesticides with reduced off-target potential, such as pyrethroids, neonicotinoids, microbial-derived agents, and growth hormone analogs. If the Asian citris psyllid threatens major California citrus areas, the IPM model of today may radically change to aggressive suppression, greatly changing the patterns of insect control. Cal/PIP results for agents used to control above-ground rodents shows little year to year change from 2004 to 2012. Second-generation anticoagulants such as brodifacoum and bromadiolone are of particular environmental concern. These two compounds have consistently comprised about 20% of applications over the time frame of years 2004 to 2012. Continued use despite the legitimate concern appears to reflect the difficult tradeoff between high efficacy vs. high potential for off-target kills. Groups interested in limiting pesticide exposure often seek simple metrics such as total pounds applied in CA per year for assessment of stewardship. An examination of the influence of spring weather patterns on use of fungicides, particularly high volume ingredients such as sulfur, indicates the need for caution in interpreting year to year trends.