California’s Pesticide Use Reporting System (PUR)

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Outline

1. Description of the PUR
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5. Conclusion
California first required limited reporting of pesticide use by 1950.

The PUR database contains records starting in 1974.

Current full use reporting system started in 1990.

The PUR database contains over 2.5 million records each year since 1990.
All pesticide applications in California production agriculture must be reported to the appropriate County Agricultural Commissioner’s office.

All pesticide applications made by commercial pest control businesses must be reported.

The exceptions: pesticide applications made by home and garden use or most institutional use are not reported.
Two Types of PUR Records

Production agricultural applications

- Applications to agricultural fields
- California defines agriculture broadly, including forests, parks, rangelands, turf
- Each record in the PUR refers to one application

Monthly summary reports

- All other uses by commercial applicators (post harvest, landscape, structural)
- Each record refers to total use of a pesticide during each month on a site in a county by the applicator
Data Collected for Production Agricultural Records

- Pesticide product used (its name and EPA registration number)
- Amount of product used, in gallons, pounds, or other units
- Crop treated
- Area of the crop planted
- Area of the crop treated
- Date of treatment
- Geographic location of the treatment (to a square mile)
- Grower or operator identifier
- Field identifier
- Method of application (by air, ground, or other method)
CalAgPermits

- Last year (2012) a new PUR/permitting system was implemented: CalAgPermits.
- This system is a comprehensive tool for counties to manage pesticide permit and use report data with integrated mapping.
- It is fully web-based.
- Use reports can be submitted using online forms or via a variety of commercial software products.
- It is funded by CACASA and DPR.
CalAgPermits

- It is a money saving advancement.
- CalAgPermits provides better validation before data arrives at DPR.
- It provides real-time feedback for DPR validation results.
- PUR data gets entered into the database more quickly than in the past.
- It provides better location accuracy with GIS integration.
Economic Costs

- DPR and CACASA both contribute up to $1.64 million to operate PUR and CalAgPermits each year.

- However, CalAgPermits includes more than the PUR, such as issuing Restricted Materials Permits.

- There is also a cost for the growers or other applicators who must input their information.

- There are several third-party farm management software systems that include use reporting as one component.
It is critical that the PUR be as accurate and complete as possible.

Even a few errors can have large effects on an analysis.

The PUR is screened for about 40 kinds of errors.

Error rate is less than 0.5%.

Probably 80 to 90% of actual use is reported.
PUR vs Sales Data

Methomyl

Graph showing the comparison of PUR and Sales data for Methomyl from 1994 to 2007.
Strengths of PUR

- PUR data includes detailed records of each agricultural application.
- Data are obtained from a census not just samples.
- Data are GIS friendly.
- Data can be linked with many other databases on the chemical, environmental, and health properties of pesticides.
Uses by Government

- Risk and exposure assessments
- Determining pesticide tolerances
- Endangered species
- Environmental monitoring
- Pest management strategies
Uses by Other organizations

- Researchers
  - Evaluating IPM programs
  - Epidemiological studies

- Public interest groups
  - Consumer and farm worker protection
  - Land use planning

- Agricultural industry
  - Marketing and research
  - Japanese MRL Prioritization Project

For links to many different studies using the PUR, including a list of publications, see: agis.ucdavis.edu/pur/
## Limitations of the PUR

- Does not include most applications to non-agricultural sites or to animals
- Non-agricultural records are monthly summaries by county
- PUR uses only a limited list of the major crops and so has no information on some minor crops or specific varieties
- Many pre-plant fumigation records do not include the crop to be planted
Limitations of the PUR

- No date of planting or harvest
- No pest information
- No information on person or business making agricultural applications
The PUR is a valuable source of high quality and detailed data on pesticide use over the last 40 years.

The PUR is maintained by a wide range of state and county agencies and private companies.

The PUR can be used for a wide range of purposes.

There are limitations in the data, such as lack of pest information and incomplete urban pesticide data.
Questions?