Current WDATCP Hot Buttons: Balance, alachlor & atrazine

2003 Wisconsin Fertilizer, Aglime, and Pest Management Conference

Jim Vanden Brook, Water Quality Section Chief
WI Department of Agriculture, Trade & Consumer Protection
Considering the use of BALANCE PRO Herbicide in Wisconsin

• BALANCE PRO Herbicide (isoxaflutole) has been conditionally used in 18 states since 1999.
• Concerns about phyto-toxicity to non-target plants & water resource contamination led WI, MI, and MN to decline registration
• Bayer CropScience applied for a section 24c label (Special Local Needs) to allow use in 2003 with additional restrictions
• DATCP developed an EIS and held hearings in July 2002
• DATCP proposed additional restrictions to allow use
Considering the use of BALANCE PRO Herbicide in Wisconsin

DATCP requirements and restrictions:

- No use in 8 Central Sands counties & Lower Wisconsin River Valley
- No use on soils highly susceptible to leaching
- No use on tile-drained fields
- Groundwater monitoring at 15 sites
- Surface water monitoring at 4 sites
- Use stops if Balance is found in groundwater above 310 parts per trillion (0.310 parts per billion)
Considering the use of BALANCE PRO Herbicide in Wisconsin

- DATCP offered the requirements and restrictions in November 2002 to Bayer CropScience
- Bayer CropScience felt the restrictions were unreasonable and declined the opportunity to register BALANCE PRO Herbicide in Wisconsin in December 2002
- BALANCE PRO Herbicide may NOT be used in Wisconsin at the present time
Status of Alachlor Management

• Alachlor (LASSO) has been registered for use since 1969
• WI has imposed no use restrictions on alachlor based on water quality issues
• The parent compound of alachlor is rarely found in groundwater, but the breakdown product ethane sulfonic acid (ESA) is commonly detected
• Nearly 28% of state private wells are expected to contain detectable levels of alachlor ESA
Alachlor
ESA and OA
Results from the 2001 Survey

- **ESA and OA**
- **ESA**
Alachlor ESA in Wisconsin Private Wells

Alachlor ESA
- < 4 ppb
- > 4 ppb < 20 ppb
- > 20 ppb
Status of Alachlor Management

- **Parent alachlor** - ES = 2 ppb; PAL = 0.2 ppb
  - Detected very infrequently (<< 1% of wells)
  - Found rarely at or above ES in groundwater
  - When found above ES, point sources are suspected
  - No use restrictions based on parent detections

- **Alachlor ESA** - *proposed* ES = 20 ppb; PAL = 4 ppb
  - Found in about 28% of Wisconsin private wells
  - Over 100 tested wells exceed the proposed PAL
  - 13 tested wells exceed the proposed ES
Status of Alachlor Management

• Alachlor ESA is the most frequently detected pesticide residue in Wisconsin groundwater
• DATCP requested a standard
• DH&FS made recommendations to DNR
• DNR conducted hearings in summer of 2002
• DNR expects to take the proposed Enforcement Standard of 20 ppb and Preventive Action Limit of 4 ppb to the Natural Resources Board this summer for final action
Status of Alachlor Management

If DNR publishes the proposed Alachlor ESA standard in NR 140:

- DATCP will investigate sites exceeding standards to determine contamination source
- DATCP may impose use prohibitions around wells exceeding the ES
- DATCP may impose use restrictions based on wells exceeding the PAL
- These restrictions would not occur before 2004 and would have to go through rule-making
Atrazine: Most widely used corn herbicide in WI; 59% of corn acres, 1.8 million lbs in 2001

Wisconsin Specific Restrictions on Atrazine
- Use prohibited on 1.2 million acres
- Use rates are about 1/2 that on Federal label
- No additional changes to Atrazine Rule for 2003
- 1st year since ‘91 that no new PAs were added
Status of Atrazine at State & Federal Levels

Reintroduction of Atrazine in Prohibition Areas

- 5 year monitoring well study to determine whether atrazine can be safely used in PAs
- 17 sites on 10-40 acres; atrazine applied 3 of 5 yrs
- Sites sampled prior to application then quarterly
- 4 years of data is available
Reintroduction of Atrazine in Prohibition Areas

Coarse Site Median TCR Results

Enforcement Standard
Reintroduction of Atrazine in Prohibition Areas

Medium Site Median TCR Results

- - - Median Result
- - - Enforcement Standard
Reintroduction of Atrazine in Prohibition Areas

• Each of 17 sites responded to atrazine application
• Atrazine residues exceeded ES at 13 of 17 sites
• Atrazine levels have increased significantly at coarse soil sites but median concentration < ES
• While higher, atrazine levels are not significantly higher at medium soil sites but median concentration > ES
Federal Actions Related to Atrazine

EPA has several initiatives related to atrazine that could impact atrazine management nationally

• Atrazine is being re-registered by EPA in 2003
  – Updated risk assessments for human health & eco-tox
  – Unclear whether or when standards will rise or fall
  – Possible mitigation scenarios are being discussed

• EPA may issue the Pesticide Management Plan rule in 2003 directing states to develop their own plans for to manage pesticides to protect water quality