

PROBLEMS WITH HERBICIDE USE

- **Herbicide resistant weeds**
- **Off site movement**
- **Crop injury**
- **Herbicide persistence/carryover**

HERBICIDE PERSISTENCE

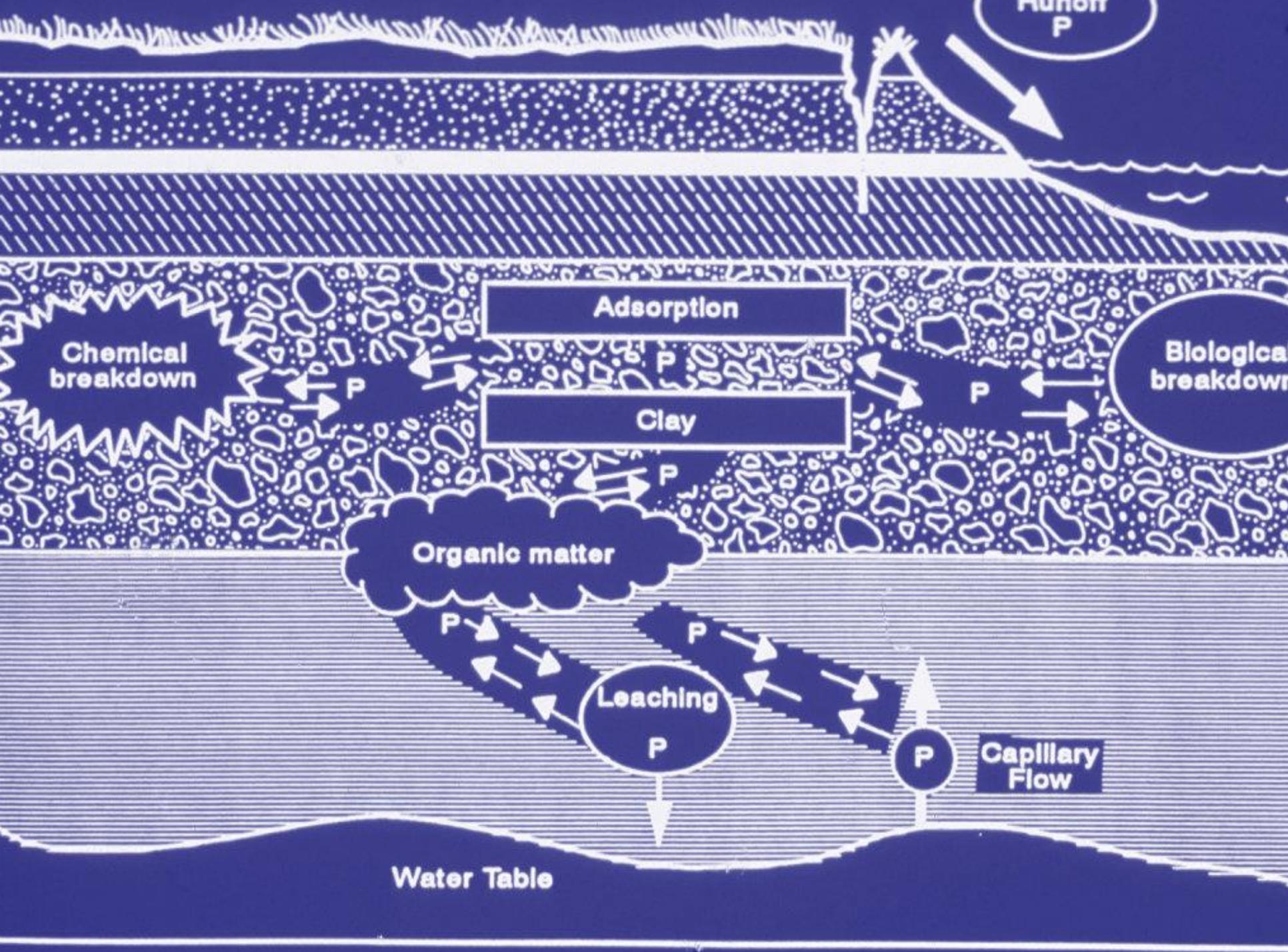
Herbicide	Persistence
Harness/Surpass	8 – 12 weeks
Dual II Magnum	10 – 14 weeks
Prowl	10 – 14 weeks
Atrazine	1 year +
Princep	1 year +

PROBLEMS WITH HERBICIDE USE

- **Herbicide resistant weeds**
- **Spray and/or vapor drift**
- **Crop injury**
- **Herbicide persistence/carryover**
- **Non-point source pollution of surface and groundwater**

Pesticide Management for Water Quality Principles and Practices

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Runoff
P

Adsorption

Clay

Chemical
breakdown

Biological
breakdown

Organic matter

Leaching
P

P

Capillary
Flow

Water Table

PESTICIDE PROPERTIES

- Half-life** - Days for concentration to decrease by one-half.
- Sorption** - Koc is measure of tendency to be attached to soil particles.
- Solubility** - ppm that will dissolve in water at room temperature

SUMMARY

- **Weed control recommendations continue to become more site specific.**
- **Where the risk of surface or groundwater contamination exists- alternatives should be used.**
- **An understanding of herbicide and soil properties is basic to responsible herbicide use.**

CCA EXAM PRACTICE QUESTIONS

WEED MANAGEMENT

1. Perennial broadleaf weeds such as common milkweed are most susceptible to translocated herbicides at what stage?

- a. Shoot emergence**
- b. Bud stage and beyond**
- c. Mid vegetative stage**
- d. Dormant**

2. Which of the following herbicides is not an amino acid synthesis inhibitor?

- a. Roundup (glyphosate)**
- b. Accent Q (nicosulfuron)**
- c. Poast Plus (sethoxydim)**
- d. Pursuit (imazethapyr)**

3. The site of action of Permit (ALS inhibitor) is most similar to which of these herbicides?

- a. Banvel/Clarity (dicamba)**
- b. Lorox (linuron)**
- c. Roundup (glyphosate)**
- d. Basagran (bentazon)**

4. A basal cluster of leaves that is not separated by obvious internodal stem elongation is a

- a. Raceme**
- b. Rosette**
- c. Leaflet**
- d. Rhizome**

5. The rate of application of soil-applied herbicides is not affected by

- a. Clay content of soil**
- b. Soil organic matter**
- c. Soil texture**
- d. Soil structure**

6. Which of these herbicides is a mobile photosynthesis inhibitor?

- a. Princep (simazine)**
- b. Basagran (bentazon)**
- c. Pursuit (imazethapyr)**
- d. Buctril (bromoxynil)**

7. Which of these herbicides would most likely carry over from one season the next?

- a. Dimetric (metribuzin)**
- b. Harness/Surpass (acetochlor)**
- c. AAtrex (atrazine)**
- d. Lorox (linuron)**

8. Which of these weeds is a biennial?

- a. Horsenettle**
- b. Bull thistle**
- c. Canada thistle**
- d. Smooth groundcherry**

10. Which of these would be the recommended choice for control of triazine-resistant common groundsel in corn?

- a. Princep (simazine)**
- b. Poast Plus (sethoxydim)**
- c. AAtrex (atrazine)**
- d. Buctril (bromoxynil)**

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