

are conducive to pesticide drift from the target area.

- *Clean up spills*—When spills do occur, contain and clean them up quickly with an absorbent material such as kitty litter. Chemicals spilled near wells can move directly and rapidly into groundwater. Chemicals spilled near ditches, streams, or lakes can move into surface water.

- *Change the location of mixing areas*—Mix and load pesticides on an impervious pad, if possible. If mixing is done in the field, change the location of the mixing area regularly. Do not mix pesticides next to a water source; do not let water run on the soil near the mixing area.

- *Dispose of wastes and containers properly*—All pesticide wastes must be disposed of in accordance with local, state, and federal laws. Pesticide containers are considered hazardous waste until they are cleaned or disposed of properly. When possible, reduce the number of pesticide containers by using bulk or returnable containers. Clean pesticide containers by triple rinsing, and add the rinsate to the spray tank. After triple rinsing, perforate the container so it cannot be reused. All metal and plastic triple-rinsed containers should be recycled, if possible. If this option is not available, dispose of them in a state-licensed sanitary landfill. Dispose of all paper bags in a sanitary landfill or a municipal waste incinerator. Do not bury or burn pesticide containers. Do not reuse empty pesticide containers for any purpose.

- *Store pesticides away from water sources*—Pesticide storage facilities should be situated away from wells and other water sources. Pesticides should be stored in a separate facility that protects them from temperature extremes, high humidity, and direct sunlight. The storage facility should be heated, dry and well ventilated. It should be designed for easy containment and cleanup of pesticide spills and made of materials that will not absorb pesticide that leaks from a container. Always store pesticides in their original containers.

Do not store protective clothing or equipment in the pesticide storage facility. Storing herbicides separately from insecticides and fungicides helps avoid contamination of one material by another and reduces accidental misuse.

Keep the facility locked when not in use. Post the facility as a *Pesticide Storage Facility* to warn others that the area is off-limits. Maintain an

accurate inventory of the pesticides stored in the facility at all times in case of emergency, such as a fire.

Michigan Groundwater Stewardship Program

The Michigan Groundwater Stewardship Program (MGSP) is a cooperative effort to reduce the risk of groundwater contamination associated with the use of pesticides and nitrogen fertilizers. The MGSP was created in 1993 by the state legislature, and is funded by assessments on the sale of nitrogen fertilizers and pesticides. The assessment generates money for educational programs, technical assistance, and cost sharing of groundwater stewardship practices. Local MGSP's - usually associated with a county MSU Extension or Conservation District office - provide farmstead pollution risk assessments (Farm*A*Syst and Field*A*Syst), develop groundwater stewardship plans, provide cost share funds used to install groundwater stewardship practices, and conduct educational workshops and on-farm demonstrations.

The MSGP also sponsors the following programs:

- Spill Response Program (1-800-405-0101) to assist individuals dealing with pesticide, fertilizer and manure spills;
- Clean Sweep to dispose of unused and unwanted pesticides safely;
- Container Recycling to assist in the safe disposal of plastic pesticide containers;
- Michigan Emergency Tube project that provides an emergency preparedness plan that meets the legal requirements of SARA Title III.

Growers that participate in some of these programs are also eligible for pesticide recertification credits. Contact your MSU Extension, Conservation District, or USDA NRCS representative to learn more about the MGSP serving your county.

Protecting non-target organisms

Bees and other pollinating insects are essential for successful production of fruits, most seed crops and certain vegetables. Many insecticides are highly toxic to pollinating honeybees and wild bees. The best way to avoid injury of bees and other beneficial insects is to minimize pesticide use. Use selective pesticides whenever possible, apply only when necessary as part of a total pest management program, and take the following precautions to reduce the chance of bee exposure:

- Do not apply pesticides that are toxic to bees if the site contains a crop or weed which is in