SECTION SEVEN

HOBBY FARM MANAGEMENT AND SAFETY

The operation, organization, maintenance and management of every hobby farm varies based on its size and primary farming activities. The responsibilities that go into tending a small vegetable garden will often differ from those that have multiple farm animals, pastures and a larger field of crops.

Previous sections have provided an overview of many of the main activities a hobby farmer may be involved with based on the type of hobby farm. However, with this comes a number of important good housekeeping, operations and maintenance, and safety measures that should be in place to help ensure a safe and healthy hobby farm environment for everyone.

MAINTAINING AN ORGANIZED AND HAZARD FREE HOBBY FARM WITH PROPER EMERGENCY PLANNING CAN HELP AVOID SMALL PROBLEMS THAT CAN GROW INTO VERY LARGE HEADACHES AND EVEN LEAD TO UNSAFE SITUATIONS.

This section focuses on good management practices such as pest management and neighbor relations; overall farm safety measures like hazardous material use and storage; equipment maintenance; and emergency planning. The fact sheets provided in Section 7 also have a connection to water quality protection.

By planning ahead and following the 'avoid, minimize, mitigate' concepts woven throughout this section, you should be able to help protect nearby wetlands and water resources by:

- minimizing your use of potentially hazardous materials
- choosing products knowing that you have the knowledge to make a well informed choice
- using and maintaining equipment and storage areas to avoid hazardous spills
- knowing that time spent preparing for an emergency can help protect you, your hobby farm and nearby water resources

Section 7 contains the following:

- FACT SHEET 7-1 Integrated Pest Management
- FACT SHEET 7-2 Pesticide Use and Water Quality
- FACT SHEET 7-3 Pesticide Label Reading
- FACT SHEET 7-4 Pesticide Storage and Disposal
- FACT SHEET 7-5 Equipment Safety and Maintenance Basics
- FACT SHEET 7-6 Reading Hazardous Material Labels and Safety Data Sheets (SDS)
- FACT SHEET 7-7 Hazardous Material Use, Storage and Disposal
- FACT SHEET 7-8 Solid Waste Management
- FACT SHEET 7-9 Neighbor Relations: Communication
- FACT SHEET 7-10 Neighbor Relations: Odor, Dust and Noise Control
- FACT SHEET 7-11 Neighbor Relations: Fly, Mosquito and Rodent Control
- FACT SHEET 7-12 Food Safety
- FACT SHEET 7-13 Emergency Management Planning
- CHECKLIST 7A Hobby Farm Emergency Contact Form
- CHECKLIST 7B Emergency Response Procedures
- CHECKLIST 7C Hobby Farm Inventory
- CHECKLIST 7D Emergency Supplies Form
- CHECKLIST 7E Hobby Farm Management and Safety

FACT SHEET 7.1

INTEGRATED PEST MANAGEMENT

Along with the many benefits of hobby farming can come challenges, including the control of pests and disease. Integrated Pest Management (IPM) is an ecologically based approach for preventing, monitoring, and controlling pests, while eliminating or reducing the use of pesticides.

PESTICIDE USE CAN BE HARMFUL TO PLANTS, ANIMALS, PEOPLE AND THE ENVIRONMENT, PARTICULARLY SURFACE AND GROUNDWATER RESOURCES. USING AN IPM APPROACH TO CONTROL PESTS, WEEDS, AND DISEASE CAN HELP MINIMIZE PESTICIDE USE.

IPM TECHNIQUES

Prevention

Prevention is the first line of defense for pest control. It often includes modifications in cultural practices to prevent or reduce pest populations by making their environment less favorable. Changes may include rotating crops, planting pest-resistant varieties, improving soil structure for better microbial activity or implementing good housekeeping measures. Prevention can also include creating suitable habitat for the natural enemies of pests to thrive – a form of biological control to better manage pest populations.

Monitor and Identify

Monitor your hobby farm area for pests, weeds, and/or disease and be sure to identify specific problem areas. Population levels should be noted along with those of any natural enemies. Remember that not all insects, weeds, or other pests require control and some can be beneficial.

Set Action Levels

The presence of a single pest (or two) does not necessarily mean that there is a problem requiring control. Setting an action level or threshold for applying pest controls helps to determine at what point action to reduce the population should be taken. This limit will be different for each hobby farm and is based on the level at which the pest becomes a threat or surpasses the point tolerable.

CAUTION!

Pesticide use should be limited since these chemicals can:

- Pose a threat to human and animal health
- Pollute groundwater and surface water
- Disrupt biological activity in healthy soil
- Eliminate non-target species including pollinators
- Persist in crops and enter food supplies

Control

Once action levels have been met and it is clear that prevention methods are no longer effective then pest control may be necessary. Evaluating the proper controls should begin with mechanical options including trapping, weeding or barrier methods. If these are not effective then chemical controls can be considered starting with those that are target specific as opposed to those that broadcast spray non-specific pesticides.

Evaluate and Record

Once control methods have been implemented, an evaluation of the effectiveness of your efforts should be completed and recorded. Since pest problems can often exhibit trends and patterns, it is recommended that your monitoring, outbreak, and treatment method information be recorded. This will help next season to select more effective prevention and control methods if needed.

IPM IS NOT A SINGLE CONTROL METHOD, BUT A DECISION-MAKING PROCESS THAT REVOLVES AROUND MONITORING, PREVENTION, CONTROL AND EVALUATION. IPM CAN SUCCESSFULLY BE USED FOR ANY SIZE HOBBY FARM.

WATER QUALITY BENEFIT

IPM aims to help naturally regulate pest populations to a level where they have no impact on your hobby farm activities. Creating an undesirable environment for disease, certain insects, rodents and other unwanted pests can help eliminate the need for pesticide use that could otherwise have lasting environmental and water quality impacts.

HELPFUL LINKS

www.ag.umass.edu/greenhouse-floriculture/fact-sheets/integrated-pest-management
www.extension.unh.edu/Integrated-Pest-Management/IPM-Publications
www.nrcs.usda.gov/wps/portal/nrcs/detail/national/home/?cid=nrcs143_023552
www.npic.orst.edu/pest/ipm.html

FACT SHEET 7.2

PESTICIDE USE AND WATER QUALITY

Hobby farmers are encouraged to implement an Integrated Pest Management (IPM) approach to help control pests. If it is determined that a pesticide is warranted to control a pest population, disease or weed that cannot be managed through prevention, mechanical control, or other non-chemical IPM methods, there are several safety steps that should be taken to protect your hobby farm and nearby surface waters.

DID YOU KNOW?

A pesticide is a substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest. Pesticides can include:

- Herbicides
- Insecticides
- Larvicides
- Rodenticides
- Fungicides
- Disinfectants
- Repellents
- Natural/biological agents

PESTICIDES ARE AVAILABLE IN MANY FORMS INCLUDING LIQUID CONCENTRATES, READY-TO-USE FORMULATIONS, GRANULES/PELLETS, BAITS AND DUSTS/WETTABLE POWDERS.

Any of these products can reach nearby surface water sources through water and wind movement. Contamination of nearby waterbodies can occur when:

- Too much pesticide is applied
- Broadcast methods are used to apply pesticides
- Pesticide is applied before heavy rains or during windy conditions
- Pesticide is leaked or spilled onto a surface then carried off with stormwater runoff
- Heavy irrigation causing runoff takes place too soon after an application
- Pesticide storage or discarded pesticide containers are exposed to precipitation

CAUTION!

Even organic pesticide products can be harmful if applied improperly. Always follow the label instructions for both organic and non-organic products and start with the lowest toxicity product first.

REGULATORY CHECK
It is illegal to apply more than the labeled application rate of a pesticide. Also, check with your local Conservation Commission prior to applying pesticides within 100-feet of wetlands and water resources and within 200-feet of perennial (flowing most of the year) rivers and streams. Finally, remember to check with your city or town before applying pesticides or herbicides within a public right-of-way.

WHEN USING PESTICIDES, CONSIDER THE FOLLOWING:

Step 1 - Choose Carefully

Select a product that is labeled for your pest and location. A product cannot be legally used unless both your treatment area and pest are mentioned on the label.

Step 2 - Get Knowledgeable Advice

Contact your local or state cooperative extension to help determine appropriate pesticide use and application practices.

Step 3 - What's Your Signal Word?

Federal regulation requires that a signal word be prominently printed on the label of most pesticide products. Signal words are based on exposure effects if eaten, absorbed through the skin, inhaled or comes into contact with eyes and skin. Signal words include:

- **CAUTION** – slightly toxic
- **WARNING** – moderately toxic
- **DANGER/POISON** – highly toxic

Step 4 - How Much Do You Really Need

Read the label to determine how much product you are really purchasing. Concentrates may come in small containers but can make a lot of product. Read the label before you purchase – it will tell you how much of the product to apply and how to apply it. Buying in bulk may be economical but not if you consider the hassle of storing and disposing of the leftover product. Remember that more is not better. Applying more than the labeled application rate is not only illegal, but can be a health risk to yourself and your family in addition to risking damage to your plants, livestock, pets, and nearby water resources.

WATER QUALITY BENEFIT
Minimizing the use of pesticides can help prevent them from reaching nearby surface water through stormwater runoff or accidental spills.

HELPFUL LINKS
www.ag.umass.edu/greenhouse-floriculture/greenhouse-best-management-practices-bmp-manual/pesticides-groundwater
www.npic.orst.edu/ingred/products.html

FACT SHEET 7.3

READING A PESTICIDE LABEL

Hobby farmers may find the need to use a pesticide or herbicide as part of an overall management program, particularly if non-chemical integrated pest management measures are not working. Reading and understanding the information provided on a pesticide label is essential for the product's safe and effective use. Most of the information on a pesticide label is required to be provided to you by Federal Law. It is against the law to use a pesticide inconsistent with its label.

WHAT THE PESTICIDE LABEL WILL TELL YOU

- What the pesticide is approved to control (e.g. type of pest or weed)
- Ingredients in the pesticide
- Pesticide toxicity
- Health hazards and first aid information
- Physical, chemical and environmental hazards
- Directions for use: how, where, when and how often to apply
- Directions for storage and disposal
- Manufacturer contact information

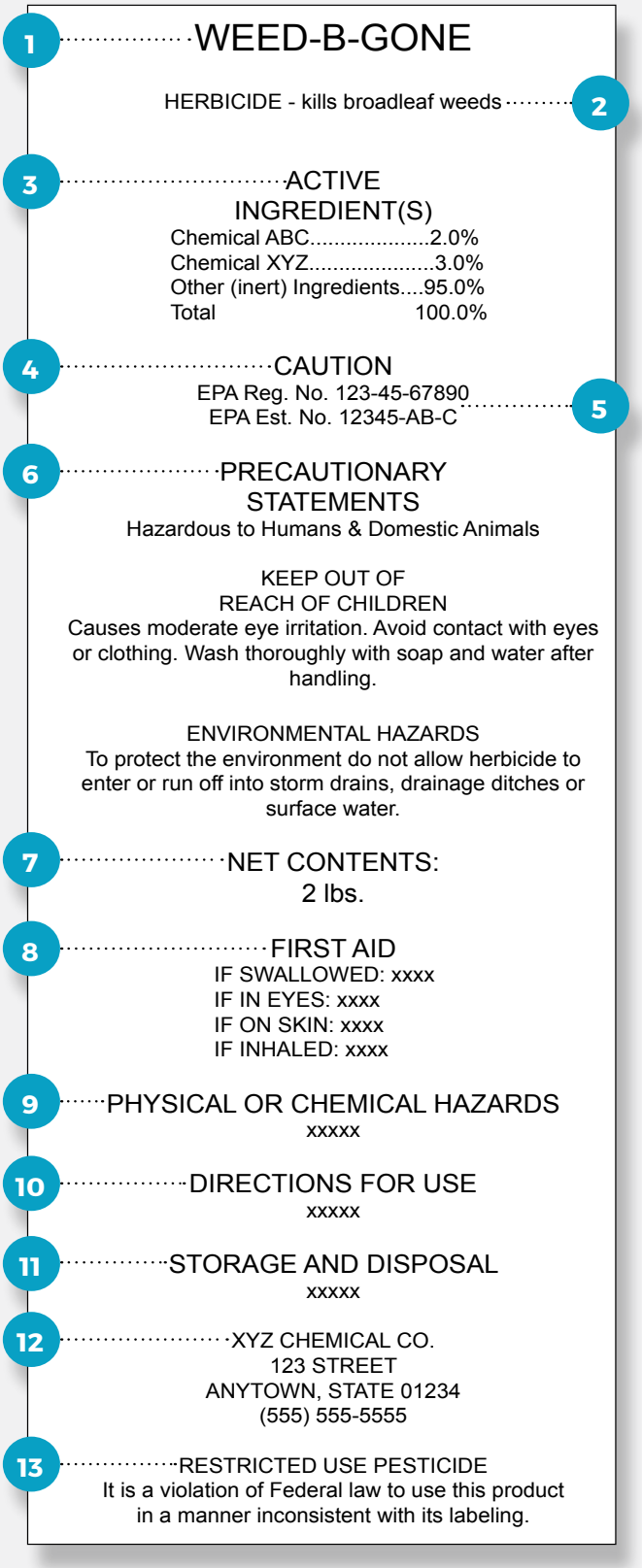
POLLINATOR PROTECTION ADVISORY ON PESTICIDE LABELS

Pesticides have long been known to impact important pollinators, including bees. A recent pesticide label change now requires the addition of a bee advisory box on certain pesticides to help protect pollinator populations. Identified by a bee icon, this advisory box alerts applicators to the potential hazard the pesticide poses to bees and other insect pollinator populations. This bee advisory box provides specific instructions and separate label restrictions to help minimize pollinator exposure during foraging (when plants and trees flower, shed pollen, or produce nectar).

REMEMBER, MANY CROPS RELY ON POLLINATORS TO BE SUCCESSFUL. ALTHOUGH WIND PLAYS AN IMPORTANT ROLE IN PLANT POLLINATION, BEES AND OTHER INSECTS ARE ALSO ESSENTIAL TO THIS PROCESS AND CAN BE NEGATIVELY IMPACTED BY PESTICIDE USE.

WATER QUALITY BENEFIT
Following pesticide label instructions can help reduce the chances of harmful chemicals reaching nearby water resources.

Sample Pesticide Label



1. **BRAND NAME -** The name used by the manufacturer. A particular active ingredient may be sold under several different brand names.
2. **PRODUCT DESCRIPTION -** Describes the type of pesticide and what it will control.
3. **ACTIVE INGREDIENT(S) -** The chemical that controls the pest. Inert or other Ingredient(s) do not directly impact the pest but help the active ingredient work.
4. **SIGNAL WORD -** Will be one of the following: CAUTION, WARNING, DANGER or DANGER/POISON with CAUTION being least toxic and DANGER/POISON being highly toxic. Signal words indicate the relative acute (short-term) toxicity of the product to humans and animals. If you are choosing between two products that will control the same pest, the signal word can be used to help choose the least toxic product.
5. **REGISTRATION AND ESTABLISHMENT NO. -** The registration # is proof that the product and label were reviewed by the U.S. EPA. The establishment # identifies the facility where the product was manufactured.
6. **PRECAUTIONARY STATEMENT -** Details of the potential hazards to people, pets and the environment. Most pesticide labels are required to say 'Keep Out of Reach of Children'. This area may also include the main route of entry (how a pesticide may enter the body), how to prevent exposure and required personal protective equipment.
7. **NET WEIGHT -** The total volume or weight in the pesticide container.
8. **FIRST AID SECTION -** Outlines what to do in case of exposure to the pesticide.
9. **PHYSICAL OR CHEMICAL HAZARDS -** Describes potential fire, chemical, or explosion hazards specific to the pesticide.
10. **DIRECTIONS FOR USE** - Details how to properly apply the pesticide safely. Information may include: what type of pest it can be used to control, where it can be used, how to apply it, how much to apply (rate of application, dilution rate), frequency (how often), when to apply it, how soon after application people and animals can come into contact with a treated area, and how soon a crop can be harvested or consumed after treatment.
11. **STORAGE AND DISPOSAL** - Details how the product should be stored and how to dispose of unused product and empty containers.
12. **MANUFACTURER** - Gives the name and contact information for the product manufacturer.
13. **RESTRICTED USE PESTICIDE** - Pesticides are either General Use Pesticides (GUP) or Restricted Use Pesticides (RUP). RUPs are generally more toxic and require the applicator to be trained and certified to purchase and apply it.

FACT SHEET 7.4

PESTICIDE STORAGE AND DISPOSAL

Proper pesticide storage and disposal is an important part of good housekeeping on a hobby farm. Poor storage and disposal practices can result in harmful chemicals reaching nearby surface and groundwater, severely impacting water quality. Pesticide storage and disposal practices should start with limiting the amount and type of pesticide stored. Purchase only the minimum of what you need for the current season.

CAUTION!
Pesticides should never be stored outdoors or on pervious surfaces where they can come into contact with soils and stormwater runoff.

PESTICIDE STORAGE AREAS SHOULD:

- ✓ Be located inside a dry secure structure or cabinet that can be locked.
- ✓ Not be in basements, locations containing open floor drains or where there is a potential for flooding.
- ✓ Be kept away from children and pets. Avoid storing pesticides in your general living area.
- ✓ Be located away from both surface and groundwater sources.
- ✓ Be stored away from direct sunlight, freezing temperatures and extreme heat.
- ✓ Be stored separately from food, feed, seeds, animals and animal supplies, fertilizers, petroleum products, lubricants, cleaners and other chemicals to avoid cross-contamination.

When storing pesticides remember to:

- ✓ Store wet and dry pesticides separately if possible.
- ✓ Keep them closed in their original labeled containers unless the container is broken and/or at risk of leaking or spilling. In this case, the material should either be used or disposed of according to the label
- ✓ Consider storing pesticide containers inside a plastic bin. This bin can provide secondary storage if a spill or leak were to occur while in storage.
- ✓ Immediately clean up pesticides, spills and follow proper disposal practices.
- ✓ Always read the pesticide label prior to storage to ensure you are storing it according to any special labeled storage instructions.
- ✓ Flammable and non-flammable pesticides should be stored separately.

WATER QUALITY BENEFIT
Good pesticide storage and disposal practices combined with efforts to reduce product use can help keep nearby surface and groundwater protected from pesticide contamination.

ACTIVE INGREDIENTS VS. INERT INGREDIENTS

Active ingredients are the chemicals in a pesticide product that control the pest. Inert ingredients are the materials in a pesticide that are added to make the product safer; more effective; and easier to measure, mix, apply, and handle. The pesticide formulation is the mixture of the active and inert ingredients.

For emergency preparedness be sure to:

- Keep Safety Data Sheets (SDS) nearby. SDSs contain more detailed information on the contents, hazards, and proper handling, storage and disposal of a product than may be on a label. You can obtain copies of SDSs from the product manufacturer and in most cases, these are freely available on the Internet. These should be stored in a nearby accessible area.
- Keep emergency clean-up material nearby such as pet litter or other absorbent material along with a shovel and waste container.
- Never hose down pesticide leaks or spills. Contaminated washwater can be highly concentrated and contaminate nearby surface and groundwater resources.
- Keep personal protective equipment such as protective clothing, helmets, goggles, or other garments or equipment designed to protect an individual using the product near the storage area. Types of protective equipment needed are typically specified on the product label or in the SDS.
- An emergency response plan should be developed to include procedures in case of a spill or accident along with emergency contact information.

REMEMBER, THE ABOVE STORAGE AND DISPOSAL PRACTICES ARE SUGGESTED. PESTICIDE LABEL INSTRUCTIONS FOR STORAGE AND DISPOSAL SHOULD BE CLOSELY FOLLOWED.

For pesticide disposal be sure to:

- Read the pesticide label to make sure you are following proper disposal practices. Using, storing or discarding pesticides and their containers in a manner inconsistent with its label is against the law.
- Empty liquid pesticide containers should be triple rinsed with the washwater collected and added to the next dilution.
- Liquid containers that have been triple rinsed and empty dry pesticide containers and bags should be discarded according to the label directions. Generally, this material can be discarded with your regular trash and solid waste.
- Do not recycle or reuse pesticide containers.
- Never pour leftover or unwanted pesticides into a sink, toilet, sewer, dry well or storm drain.
- Most communities hold household hazardous waste days where pesticides can be brought for proper disposal.

HELPFUL LINKS

www.ag.umass.edu/greenhouse-floriculture/fact-sheets/pesticide-storage
www.ag.umass.edu/greenhouse-floriculture/greenhouse-best-management-practices-bmp-manual/pesticide-storage-handling
www.mass.gov/eea/agencies/massdep/recycle/hazardous/pesticides.html
www.epa.gov/pesticide-labels/keep-safe-read-label-first

FACT SHEET 7.5

EQUIPMENT SAFETY AND MAINTENANCE BASICS

Hobby farm equipment will vary from one farm to another often based on the size of the hobby farm and the types of activities. Typical equipment includes: garden tools, wheelbarrow or hand cart, rototiller, lawn mower and small electric or gas power equipment.

Some hobby farms might even have a small tractor, utility vehicle and/or livestock trailer. Whether it's a large piece of complex equipment or a simple hand tool, safety and maintenance is important to prevent injuries and protect nearby water resources.

STAY ON TRACK
Read and Follow the Owner's Manual - Before using any equipment, read the manual to be familiar with its operation, maintenance, and any warnings.

EQUIPMENT STORAGE, FUELING, AND MAINTENANCE

All hobby farm equipment should be stored, fueled and maintained in a manner that reduces the potential for injury and the likelihood of chemicals to be released into the environment. One way is to store equipment indoors, on a hard, impermeable surface to prevent any potential leaks from coming into contact with soils. Be sure to fuel and maintain equipment on an impermeable surface and under cover, but not indoors, if possible.

Follow these safety tips for hobby farm equipment storage, fueling, and maintenance:

Storage

- When parking vehicles, use the 'Safe Stop' method where you: stop in a safe place, apply the handbrake, disengage, lower any attachments, turn off the engine and remove the key.
- Immediately clean up spills and leaks of fuel or maintenance fluids which can occur under and around stored power equipment. Be sure to keep a spill cleanup kit nearby.
- Do not wash areas containing spills – use dry methods such as absorbent pads and socks or even clean kitty litter whenever possible.

CAUTION!
If a petroleum spill of more than 10 gallons occurs, or if any size spill reaches a waterbody or storm drain, you should call the fire department (911), then the Massachusetts Department of Environmental Protection at their 24-hour spill reporting hotline (1-888-304-1133)

CAUTION!
Many hobby farms have portable generators for use during a power loss. There are inherent hazards associated with generator use and if operated incorrectly could lead to electrocution, carbon monoxide poisoning, or fire to name a few. The following link provides basic generator safety tips to help ensure safe use of your portable generator - www.osha.gov/OshDoc/data_Hurricane_Facts/portable_generator_safety.pdf

Fueling

- When filling gas canisters, always place the canister on the ground before filling.
- Do not refuel equipment near a wetland or water resource area.
- Do not top off fuel tanks.
- Never leave equipment unattended while fueling.

Maintenance

- Follow maintenance procedures and schedules found in the equipment manual – regular maintenance can prevent equipment failure and fuel spills during operation.
- Collect and recycle oil, transmission fluid, and hydraulic fluid whenever possible. Recycling often removes this material from your hobby farm as well as the potential for accidental spills.
- Leaks can occur after maintenance so placing a clean piece of cardboard or drip pan (if outside) underneath the equipment can help detect leaks.
- Check the fluids regularly (engine oil, transmission fluid, coolant level, etc.) – low levels may indicate a leak.

Enforce the "No Riders" Rule

Most tractors are not equipped to accommodate extra riders or passengers, especially children. Unless your tractor has an 'instructor seat', extra riders are at risk of severe injury or death due to being crushed by the tractor or trailing equipment in the event of an accident. Sudden stops, sharp turns or holes can easily cause a rider to be thrown from the tractor – even tractors with enclosed cabs. No matter how slow you are driving, you cannot stop a tractor before it rolls over a thrown rider. A "NO RIDERS" rule for all tractors at all times may be the single best way you can assure the safety of others.

THOUSANDS OF ACCIDENTS INVOLVING CHILDREN OCCUR EVERY YEAR IN FARM ENVIRONMENTS, INVOLVING FARM MACHINERY, EQUIPMENT AND ANIMALS.

The following links include useful information on how to keep children safe in a farm environment:

- www.farmsafety4kids.net
- www.uvm.edu/extension/youth/youthfarmsafety/?Page=resources.html

WATER QUALITY BENEFIT
Store, fuel and maintain all farm equipment properly and away from wetlands, streams, rivers, lakes, ponds and storm drains. Doing this can help eliminate leaks and spills and keep hazardous materials out of nearby surface waters.

FACT SHEET 7.6

READING HAZARDOUS MATERIAL LABELS AND SAFETY DATA SHEETS (SDS)

Hobby farms commonly use small amounts of hazardous materials. Hazardous materials are defined as chemical, biological or physical substances that can cause harm to people, animals, and/or the environment. This may include: fuel and lubricants for equipment, fertilizers, pesticides, herbicides, medications and cleaning solutions.

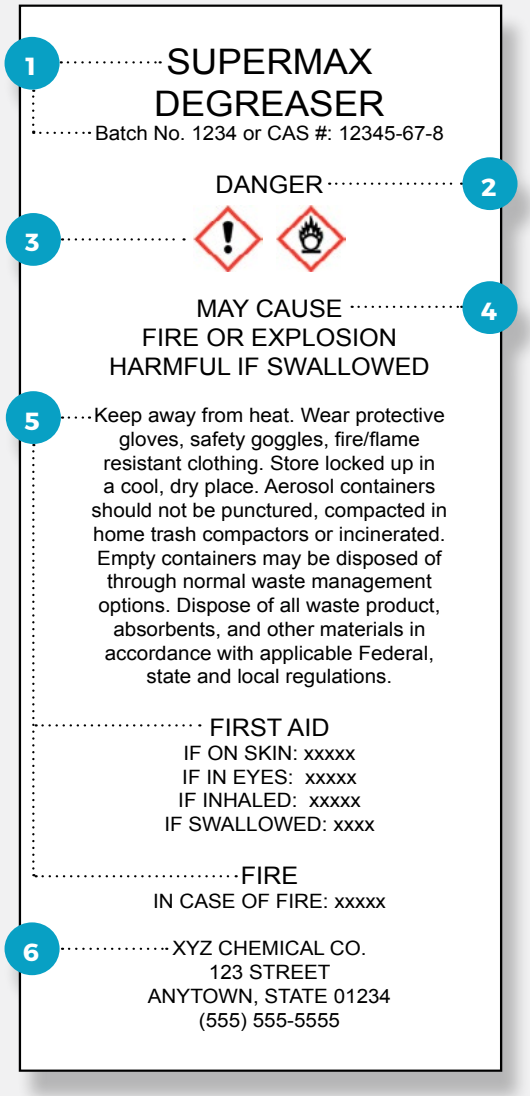
If incorrectly used or mishandled, hazardous materials can be a source of surface water pollution. Reading and understanding the information provided on product labels is essential for the safe and effective use of these materials and to help prevent unwanted health and water quality impacts.

The following provides guidance on how to read hazardous material product labels and how to identify their hazards*.

1. **PRODUCT IDENTIFIER** - Includes the chemical name to identify the product.
2. **SIGNAL WORD** - Indicates the relative level of severity of the hazard the chemical presents, "Warning" is used for less severe hazards and "Danger" is used for more severe hazards.
3. **PICTOGRAM OR HAZARD WARNING SYMBOL** - Standard symbols used to quickly convey specific information about chemical hazards. Hazard warning symbols found on labels provide a quick reference to the dangers of a product, and precautions to be taken when storing and handling it.
4. **HAZARD STATEMENT** - Describes the nature of the hazard.
5. **PRECAUTIONARY STATEMENT** - Describes measures to prevent adverse effects from exposure, or improper handling of the chemical. The four types of precautionary statements include chemical information related to prevention, response procedures, storage and disposal.
6. **CONTACT INFORMATION**- Name, address and telephone number of the chemical manufacturer, importer or other responsible party.

*Note that pesticides have their own labeling system and are often labeled differently than hazardous materials.

Sample Hazardous Materials Label

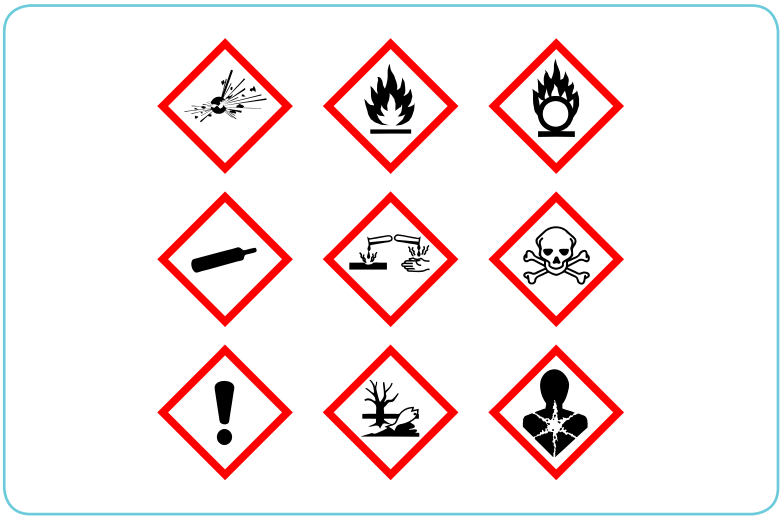


DID YOU KNOW?
A hazardous material is a chemical, biological or physical substance that has the ability to cause harm to people, animals and/or the environment. A hazardous material that can no longer be used for its intended purpose is called a hazardous waste. It is a material that has been spent, used up or contaminated beyond its ability to be used.

SAFETY DATA SHEETS (SDS)

For more detailed information on a chemical, you can refer to the Safety Data Sheet (SDS). It's a good idea to have a SDS for all hazardous chemicals you use and store on your hobby farm. SDSs contain similar, but more detailed information about a product than the label and includes:

- product identification
- hazard identification
- composition/information on ingredients
- first-aid measures
- fire-fighting measures
- accidental release measures
- handling and storage information
- exposure controls/personal protection
- physical and chemical properties
- stability and reactivity
- toxicological information
- ecological information
- disposal considerations
- transport information
- regulatory information



BEFORE BUYING

Always read the label of a product before purchasing. Consider using the safest option that will get the job done and look for products that are non-toxic, biodegradable, and contain no hazardous ingredients, if available. However, remember that even these products can impact water quality if not handled properly. Always purchase the least amount necessary to get the job done. Storing and disposing of unused chemicals increases the risk of exposure and leaks.

READING YOUR CHEMICAL LABEL AND UNDERSTANDING ITS RISKS AND WARNINGS IS AN IMPORTANT STEP IN PROPER HAZARDOUS MATERIAL MANAGEMENT. THE MORE YOU KNOW ABOUT THE PRODUCTS YOU USE, THE BETTER EQUIPPED YOU ARE FOR NOT ONLY PREVENTING SPILLS TO PROTECT WATER QUALITY, BUT FOR EFFICIENTLY AND EFFECTIVELY DEALING WITH AN EMERGENCY SHOULD ONE OCCUR.

CAUTION!
A Safety Data Sheet (SDS) should be kept for all chemicals utilized on your hobby farm and be easily available in the event of an emergency such as a spill or fire.

FACT SHEET 7.7

HAZARDOUS MATERIAL USE, STORAGE AND DISPOSAL

Hazardous materials and waste can be used and generated as a result of a number of common hobby farm activities. Fuel, lubricants, antifreeze, fertilizers, pesticides, herbicides, paints, cleaners, and medicine are a few of the hazardous products that may be used on hobby farms. The proper use, storage, and disposal of these materials is an important part of good housekeeping and water quality protection.

A hazardous material may occur as a solid, liquid or gas and is defined as any item or agent (biological, chemical, radiological, and/or physical) which has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors.

If a material exhibits one or more of the characteristics listed below or contains a number of toxic constituents that have been shown to be harmful to human health and/or the environment, it is hazardous.

- **Ignitable** — capable of being burned or causing a fire.
- **Corrosive** — capable of dissolving metals and/or other materials and destroying living tissue on contact.
- **Reactive or Explosive** — unstable or undergoes a rapid or violent chemical reaction when exposed to air, water or other chemicals.
- **Toxic** — poisonous, either immediately or over a long period of time to plants and/or animals.

START WITH THE 3 R'S

- **Reduce** the amount of waste generated by purchasing only what you need. Consider a less hazardous or non-hazardous alternative.
- **Reuse** by giving unused or unwanted products to others who could use them.
- **Recycle** whenever possible by working with your community recycling center.

CAUTION!
If a petroleum spill of more than 10 gallons occurs, or if any size spill reaches a waterbody or storm drain, you should call the fire department (911), then the Massachusetts Department of Environmental Protection at their 24-hour spill reporting hotline (1-888-304-1133)

HAZARDOUS MATERIALS STORAGE

- Make an Emergency Management Plan, including what to do in case of a spill.
- Always keep a spill cleanup kit nearby in case of spills.
- Keep Safety Data Sheets for each chemical in a separate but nearby location from your storage area.
- Keep hazardous materials inside a secure structure or cabinet that can be locked, keeping them safe from spills and accidents and inaccessible to children and animals.
- Always store material in the original container with the original label. If the container is at risk of leaking, place it in a secondary container and promptly use or dispose of it.
- Consider placing the material in a secondary container, such as a plastic storage bin, to catch potential leaks or spills (but only if the storage bin material and the method of storage is consistent with the SDS instructions).
- Keep in a location away from surface water and groundwater resources.
- Do not store materials in basements, areas prone to flooding, or in areas with floor drains.
- Store in a dry area, away from sunlight, freezing temperatures, and extreme heat.
- Keep materials away from general living areas and always store away from food, animal feed and seeds.
- Separately store chemicals by hazard class such as flammables in one area and poisons in another. Similarly, separate acids and bases from each other and other incompatibles. Visit the following link for helpful information on chemical storage: www.bu.edu/ehs/files/2011/03/Chemical-Segregation-and-Storage-Chart.pdf.
- If keeping hazardous materials in a secure storage cabinet is not possible, store them off of the ground in a dry location to prevent corrosion or washing away of chemicals or in secondary containment such as a plastic tub (consult the SDS to make sure the chemical is not reactive with the plastic).
- Rags used to clean up liquid spills may be a fire hazard. Store them in a covered, combustion-proof container.

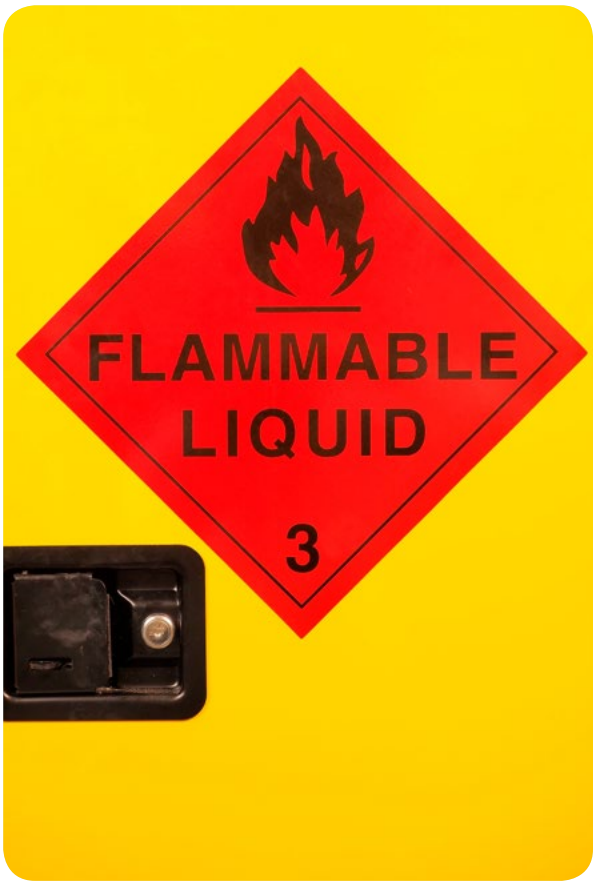
REMEMBER: REDUCE THE AMOUNT OF WASTE THAT MUST BE DISPOSED OF BY BUYING ONLY THE AMOUNTS NEEDED TO COMPLETE THE JOB OR GIVING THE REMAINING PRODUCT TO SOMEONE WHO CAN USE IT. THIS ALSO PREVENTS ACCIDENTS OR CONTAMINATION THAT COULD RESULT FROM IMPROPER STORAGE.

CAUTION!
Never dispose of hazardous materials or waste directly onto the ground, into surface waters or into storm drains or catch basins. Also, never dispose of hazardous materials or waste in household trash, unless the product label or SDS indicates this is okay.

HAZARDOUS MATERIAL USE

- Prepare for accidents – know what you will do if you have a spill or an emergency. Always have a spill kit nearby.
- Don't eat, drink, or smoke while handling hazardous products.
- Wear appropriate clothing and protective equipment for working with the chemicals – goggles, gloves, long sleeve shirt, respirator, or a dust mask may be just a few of the necessary protective measures to take.
- Never mix hazardous materials together unless specified by the manufacturer's instructions.
- Use the correct amount for the job as specified on the product label – twice as much is rarely twice as effective.
- If working indoors, make sure the space is well ventilated.
- Always wash your hands after handling hazardous materials.

HAZARDOUS MATERIAL DISPOSAL



- Find where you can dispose of household hazardous waste by visiting the MassDEP's Municipal Household Hazardous Waste Collection Facilities website: www.mass.gov/eea/agencies/massdep/recycle/hazardous/household-hazardous-waste-collection-facilities.html. If your city or town is not listed, there are several facilities available to residents of all municipalities.
- Contact your city or town to learn what hazardous material and waste collection programs are available.
- Used oil can be returned to the store where you bought it. Retailers are required to accept up to 2 gallons per person, per day if you have the purchase receipt.
- Oil filters can contain up to 12 ounces of oil. To recycle, puncture the domed part of the oil filter with a sharp tool. Drain filters on a rack while they are hot for 12 hours, then bring to the auto supply store for recycling.
- Never pour hazardous materials down drains, especially those connected to a septic system where materials may kill organisms needed to break down waste. This could also be a pathway for hazardous materials to contaminate groundwater.
- For help on recycling a specific type of hazardous material, visit the MassDEP's Hazardous Household Products: Handling and Management webpage: www.mass.gov/eea/agencies/massdep/recycle/hazardous/hazardous-household-products-handling-and-management.html.

IF YOU ARE GENERATING LARGE AMOUNTS OF HAZARDOUS WASTE, YOU MAY NEED TO REGISTER AS A HAZARDOUS WASTE GENERATOR.

Visit the following link for registration thresholds and additional information: www.mass.gov/eea/agencies/massdep/recycle/hazardous/the-very-small-quantity-generator-of-hazardous-waste.html.

FACT SHEET 7.8

SOLID WASTE MANAGEMENT

Depending on your specific hobby farm activities, you could produce a variety of solid wastes that will require disposal or recycling. Solid waste is often comprised of discarded materials including household trash, building debris, paper, plastic, glass, food waste, yard waste, animal waste and scrap material but does not include hazardous materials waste that require special disposal. The proper storage, handling and recycling of solid waste is important to prevent the transport of contaminants to water resources.

DID YOU KNOW?
Many communities have free recycling programs. Check with your community to see what waste materials you can recycle such as paper and cardboard, building materials, scrap metal, plastic, glass and appliances. Many recycling centers also accept certain universal waste such as batteries, fluorescent bulbs, and mercury containing items like thermometers.

SOLID WASTE MANAGEMENT SHOULD ALWAYS BEGIN WITH THE THREE R'S – REDUCE, REUSE AND RECYCLE.

By reducing, reusing and recycling you can significantly lower the volume of solid waste you need to manage on your hobby farm.

There are several types of solid waste including:

- **Organic Waste** – any waste that will decompose naturally. Organic waste often may be composted or reused, such as animal manure or yard and garden waste.
- **Recyclables** – any materials that can be separated and recycled like metal, paper and plastic.
- **Municipal Solid Waste** – includes household trash and other non-hazardous waste that is not organic and cannot be recycled.

RECYCLE
Consider composting your yard and garden waste along with manure generated from farm animals. This compost can be highly sought after by gardeners as a soil amendment since it can be high in nutrients and organic matter. Visit www.howtocompost.org for more information on composting or see Fact Sheets 4.7 and 5.5.

MANAGING SOLID WASTE

Consider the following steps when managing solid waste:

- All waste management areas, including dumpsters, should be located on a flat, paved surface and away from storm drains and water resources.
- Dumpster and waste receptacles should be leak-tight with lids to keep precipitation out.
- Consider using animal proof receptacles to prevent animals such as raccoons, squirrels, dogs and other critters from entering your trash and making a mess.
- If there is unavoidable leakage, either place the container in an enclosed area or construct a berm around it to contain the leakage. Leaking material from dumpsters and waste receptacles may contain pollutants that should be prevented from reaching soils and surface waters.
- Solid waste not in containers should be covered. Acceptable coverage includes plastic tarps and building overhangs.
- Prevent stormwater runoff from other parts of the hobby farm from entering your solid waste management area by enclosing the area or building a berm.
- Take special care when loading or unloading solid waste to minimize spills. Clean up spills immediately when they occur.
- Ensure that only appropriate solid wastes are added to the solid waste container. Certain wastes such as hazardous wastes, appliances, fluorescent lamps, pesticides, batteries, etc. may not be disposed of in solid waste containers. Always check with your municipality or solid waste disposal company.

INSPECTION AND MAINTENANCE

Regularly perform the following to ensure proper solid waste management:

- Sweep and clean your solid waste storage area regularly.
- Inspect solid waste containers for structural damage or leaks regularly. Repair or replace damaged containers as necessary.
- Regularly recycle or dispose of unused scrap/junk materials.

WATER QUALITY BENEFIT
A sound solid waste management plan can help you maintain good storage practices, minimize disposal costs and maximize recycling opportunities, while preventing waste material from entering nearby storm drain systems and surface waters.

FACT SHEET 7.9

NEIGHBOR RELATIONS: COMMUNICATION

Hobby farms can be found in all areas of the country with their small size making them ideal to be located in suburban and rural neighborhoods. Even though hobby farmers tend to manage less land and fewer animals, they still have to deal with some of the challenges that larger agricultural operations face, just on a smaller scale and often with less time and assistance.

These challenges can include manure management, noise and odor control, pest management, and erosion. However, along with these challenges comes the task of learning to co-exist with non-farming neighbors (and vice-versa!). Being a good neighbor becomes even more crucial in higher density areas where there is little buffer between you and your neighbor, which can sometimes lead to your struggles becoming that of your neighbors' as well.

KNOW YOUR LOCAL RULES AND REGULATIONS

Every community has different rules when it comes to what you can and can't do with your property. It helps to be familiar with the land use regulations specific to your city or town since they often differ from one community to another. Know what permits you need and be knowledgeable about the rules and regulations that apply to you.

These may include:

- minimum property line setbacks
- nuisance (noise/odor/dust) ordinances
- fencing requirements/restrictions
- minimum required area for specific animals
- animal-specific rules such as a limit on roosters

WATER QUALITY BENEFIT

Adhering to good hobby farm practices not only make your activities more conducive to happy neighbors but the protection you provide to nearby surface waters will benefit your entire community as a valued resource.

HOBBY FARM LAYOUT

Choosing a hobby farm layout can have an immediate impact on neighbor relationships. Hobby farmers should be mindful of the sounds and smells that will be generated from hobby farming activities and how they may be offensive to non-farming neighbors. The relationship between a hobby farmer and neighbor can often lead to conflicts when a layout does not take into consideration potential impacts to neighbors.

Precautions to locate activities away from neighboring properties and to provide visual, odor and noise barriers can help to avoid possible complaints.

- Choose the right fencing to prevent animals from entering neighboring properties.
- Provide adequate screening to protect neighbor privacy.
- Consider a vegetated buffer or windbreak to help prevent the drift of odor, dust and noise from your property to your neighbors.
- Locate compost and manure piles downwind and as far as possible from neighboring houses and yards, keeping in mind surface water resources and storm drain locations.

COMMUNICATING CAN BE KEY TO COEXISTING

The best way to communicate with a neighbor is to get out and meet them. Meeting your neighbor is a great way to gage their point of view when it comes to your hobby farm plans and activities. A farmer's communication skills may be as important as minimizing odors, noise or pests to maintain a good relationship with your neighbor.

Know your neighbor

- Be neighborly and a good listener.
- People are often more open to individual discussion and will become an ally once a personal connection is made.
- Resolve conflicts through compromise and by adjusting farming practices that are the source of the problem.
- Neighbors are a great resource for information. Discussions may lead to information that could be helpful in managing your hobby farm.
- Invite neighbors over to show them the farm, talk about your activities and how you have taken actions to mitigate potential nuisances caused by your hobby farm.
- Invite neighbors over to observe or participate in the harvest or other milestones.

Most hobby farmers are very good at raising animals and growing food. You may find that you end up with excess food during the year. Bringing your neighbor fresh eggs and vegetables or hosting a neighborhood barbecue is a great way to show your appreciation for being a good neighbor and build positive relationships.

GOOD HOUSEKEEPING

The appearance of your hobby farm plays a big role when developing neighbor relationships and can be a direct reflection on you and your willingness to be considerate of your non-farming surroundings. Hobby farming is a commitment that requires a lot of time. Make sure you can handle the daily and weekly schedule required to complete your farming activities and maintenance so your property won't become a neighborhood eyesore. Investing time to maintain an eye-pleasing farm will help gain the support of your neighbors.

FACT SHEET 7.10

NEIGHBOR RELATIONS: ODOR, DUST AND NOISE CONTROL

Hobby farms are located in all sizes and types of communities and neighborhoods. As a result, neighbor considerations should always become part of your farm management plan. A common but often challenging issue is odor, dust and noise control.

ODOR CONTROL

A common complaint from non-farming neighbors can be odor. Complaints associated with odor typically occur in the spring and summer when work on a hobby farm is at its peak and neighbors begin spending more time outdoors. Hobby farms with animals tend to have more complaints due to the accumulation of manure. When manure breaks down, hydrogen sulfide, ammonia and methane are released into the air and together cause an unpleasant odor. Hobby farms growing crops can also receive odor complaints if they have compost piles or apply manure to gardens and crops.

There are three basic strategies to control agricultural related odor:

1. Prevent the creation of odors.
2. Reduce existing odors.
3. Disperse odor before it leaves your hobby farm boundaries.

For more information on the above steps, visit: https://ag.umass.edu/crops-dairy-livestock-equine/fact-sheets/odor-control.

Consider the following odor control tips:

- Determine the direction of prevailing winds and locate animal yards, manure storage and compost areas downwind of neighbors to minimize odors and dust blowing in the direction of neighbors.
- Evaluate your available space to support healthy animals. Determine your 'stocking rate' or amount of space each animal requires to be properly cared for. Uncontrollable odor may be an indication that you have exceeded the number of animals you have room for or that you need to readjust your animal management practices such as your manure management plan.

REGULATORY CHECK

Many communities have local air pollution or nuisance regulations that address noise, odor and dust issues. Ranging from specific standards such as limiting noise decibel ranges during daytime hours to determining if odor or dust is a nuisance that is causing harm or impeding one's use of property, these issues are most often addressed on a local level. Contact your city or town hall for more information.

WINDBREAKS

Vegetated buffers, filters and strips can serve as windbreaks if placed around the perimeter of the area causing odor, dust and noise. Planting a variety of native shrub and tree species can disrupt these nuisance conditions and help control impacts to neighbors.

- Reduce application rates of surface-applied manure or switch to composted or aged manure.
- Avoid applying manure, fertilizers or other soil amendments on weekends, holidays, or when social events are taking place.
- Follow good housekeeping practices for routine care of barns, animal yards and other animal enclosures. Employ proper stormwater management practices and good ventilation and air distribution near these animal areas to keep them dry.
- Follow proper composting procedures and consider adding a layer of wood chips on top of compost or manure piles to help reduce odor.

DUST CONTROL

Dust control can be a problem for hobby farmers and quickly become a neighbor complaint, particularly during drier times of year. The most effective means of dust control is prevention.

Consider the following dust control tips:

- Do not plant or disturb soil during high winds.
- Plant soon after soil is turned or plowed to quickly stabilize the ground.
- Cover compost, manure piles and any other earthen piles.
- Stabilize unvegetated areas and locations susceptible to erosion.
- Use cover crops to minimize wind erosion.
- Seed bare or sparsely vegetated pasture areas.
- Promote water retention in garden soils by maintaining a high organic content through the use of compost and other organic soil amendments.
- Apply gravel to locations where frequent dust problems occur such as on unpaved roads, pathways and in animal yards.

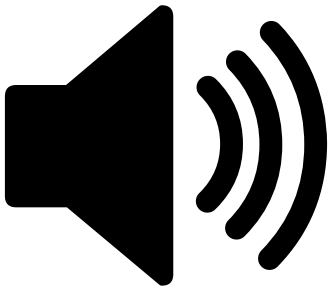
AIRBORNE DUST PARTICLES CAN CAUSE RESPIRATORY PROBLEMS FOR HUMANS AND ANIMALS RESULTING IN BOTH SHORT AND LONG-TERM HEALTH EFFECTS. DUST IS NOT ONLY A NUISANCE, BUT CAN BE A HEALTH HAZARD.

CAUTION!
Check the weather and avoid activities during high winds that can stir up dust and other particulates and create excessive odor.

NOISE CONTROL

Many sounds are generated on a farm. You may love the sounds of farm animals and the tractor running in a nearby field, but the noise may be annoying to some neighbors. Sound generated by animals and farm equipment may be perceived as noisy and intrusive if the sound levels are higher than typical background levels. Many communities have a noise ordinance in place to limit the allowable noise levels at different times of the day. Maximum allowable noise levels are typically higher during daytime hours and lower during nighttime hours.

Noise generated from hobby farms will vary, based on the number and types of animals being raised, the range of farming activities, types of equipment, landscape, and location relative to adjacent properties.



Animal noises become more noticeable when large numbers of animals are present. Sheep, goats and roosters will typically generate more noise than other farm animals which should be a consideration when choosing which animals to raise on your farm. Farm animals and farming activities should be located as far as possible from neighbors to minimize noise intrusion.

Hobby farmers should be aware that the time of day farm equipment is used will generate a noticeable difference in the noise level. Operating equipment in the late evening and early morning may be perceived as noisier and more intrusive than daytime operation.

HOBBY FARM NOISE CAN BE SIGNIFICANTLY REDUCED WITH THE USE OF SCREENING SUCH AS EARTHEN BERMS, FENCES, VEGETATION AND STRUCTURES. WHEN TRYING TO REDUCE NOISE LEVELS IT IS BETTER TO INCLUDE MULTIPLE TECHNIQUES TO ABSORB, DEFLECT, AND MUFFLE INTRUSIVE SOUND. LOCATING A SCREEN AS CLOSE TO THE SOURCE AS POSSIBLE WILL BE MOST EFFECTIVE AT REDUCING NOISE.

WATER QUALITY BENEFIT
Controlling the drift of materials offsite can help prevent windborne particles from reaching nearby waterbodies and impacting water quality.

HELPFUL LINKS
www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1167383.pdf
www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1049502.pdf
www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/mdpmctn7166.pdf

FACT SHEET 7.11

NEIGHBOR RELATIONS: FLY, MOSQUITO AND RODENT CONTROL

Hobby farms have numerous areas that could attract and promote the breeding of pests. Compost piles, crop residue, manure and animal feed can encourage the presence of flies, mosquitoes, and rodents if not managed properly.

Consequently, because of the close proximity of neighboring properties, an increase in pest populations will create a nuisance for your neighbors. Hobby farmers can prevent infestations from occurring with good farm management practices that include an Integrated Pest Management (IPM) program beginning with prevention.

RODENT CONTROL

Rodents can affect hobby farms in several ways. They can carry disease and contribute to the spread of other diseases caused by the parasites that infect them. Physical damage to structures can occur as a result of rodents chewing on materials such as wood, plastic, rubber and electrical wiring. Finally, rodents can cause crop damage, eat animal feed and even consume young chicks.

Techniques for controlling rodents:

- Introduce a predator such as a barn cat.
- Keep your barn, storage and animal areas clean by using good housekeeping practices.
- Keep all extra feed in sturdy, closed, rodent proof metal containers.
- Always clean up spilled feed and dispose of empty feed bags.
- Immediately dispose of or compost food waste.
- Don't leave food or water out at night.
- Fix leaky taps, hoses and pipes; and empty all water holding containers when not in use.
- Keep grass cut short and do not pile brush near structures.
- Remove old building materials and eliminate any other potential hiding spots.
- Remove and dispose of rodent nests as soon as they are found.
- Use proper compost and waste management techniques.

CAUTION!
Rodents are not only a nuisance and health hazard but with their inclination to chew on electrical wires, can be the cause of structural fires. Encase wires in metal conduit pipe to help prevent rodent access and use the above management techniques to help control rodent populations.

MOSQUITO CONTROL

Mosquitoes can be more than just an annoyance on and around a hobby farm; they can carry disease that may impact human and animal health. Horses, livestock and pets can be susceptible to diseases and parasites that mosquitoes carry and transmit. Hobby farms often offer a perfect environment where mosquitoes can thrive. Any standing water sources such as ditches, troughs, feed bowls and old tires can provide a breeding ground for mosquitoes if not regularly flushed or emptied. Maintaining proper drainage and taking measures to reduce mosquito populations around the farm will help protect you, your neighbors, and animals by lowering the risk of exposure to mosquito-borne disease.

Techniques for controlling mosquitoes:

- Provide proper drainage and infiltrate stormwater runoff where possible to prevent standing water.
- Flush or empty troughs and water bowls regularly.
- Prevent and eliminate standing water in old tires, clogged gutters, wheelbarrows, bird baths, buckets, and any other areas that can hold stagnant water.
- Inspect and fill puddles that may develop along roadways and in barnyards, animal yards and fields.
- Use yellow incandescent or fluorescent lights which are less attractive to mosquitoes.
- Increase air circulation in barn and stables to make it difficult for mosquitoes to navigate.
- Attract natural predators by installing bird and bat houses.
- Prevent untreated runoff from washing fertilizer and manure into waterbodies. This can promote weed and algae growth that can result in stagnant water – key mosquito habitat.

CAUTION!
The use of pesticides is always an option to control pests. However, consider the benefits vs. risks since many pesticides can be toxic to farm animals, crops, house pets and humans. Certain pesticides can also impact beneficial soil microorganisms, natural predators and pollinators. Always read the pesticide label first and follow instructions for both application and disposal.

FLY CONTROLS

House flies and stable flies are common pests found on hobby farms and can become a complaint among neighbors. Fly populations can peak during summer months as they reproduce in warm and damp environments that are often found around hobby farms. The Horn Fly and Face Fly are most common among pastures while the House Fly and Stable Fly are more often a problem around barns and stable areas. Having a small population of flies is common but an infestation usually indicates a failure in one or several key areas:

- Poor management of manure and compost piles.
- Inadequate drainage around the barnyard, allowing excessive moisture.
- Lack of daily good housekeeping practices and maintenance.
- Failure to clean up spilled feed or soiled straw bedding.

Eliminating favorable conditions for fly breeding is the first step toward controlling the population; however, a combination of control methods is often needed to reduce populations to an acceptable level.

Techniques for controlling flies

- Introduce biological controls to interrupt the reproductive cycles of flies. There are many beneficial insects (parasitic wasps, predatory beetles) that can provide natural and very effective fly management. The population of flies and their predators will reach a natural balance such that flies do not reach pest levels.
- Mound compost and manure in a large enough pile to maximize heat and make it less desirable for flies to lay eggs.
- Spread manure in a thin layer in fields and pastures to allow it to dry out.
- Routinely remove spilled feed and straw bedding to prevent moist areas in the barn and stalls.
- Clean feed tubs and buckets to avoid accumulating moist, decaying feed waste.
- Remove piles of rotting leaves, grass clippings, decaying fruit or vegetables from gardens where flies will lay eggs.
- Install pest strips, sticky traps and insect baits inside buildings.
- Attract natural predators by installing bird and bat houses.
- Install fans in buildings to make it difficult for flies to navigate.

WATER QUALITY BENEFIT

Be sure to prevent untreated stormwater runoff from your hobby farm that can carry nutrients and bacteria into nearby waterways. Protecting the water quality of nearby water resources can help promote habitat appealing to natural mosquito predators such as dragonflies, fish, birds, bats and amphibians.

HELPFUL LINKS

www.ag.umass.edu/crops-dairy-livestock-equine/fact-sheets/rodent-control
www.ag.umass.edu/crops-dairy-livestock-equine/fact-sheets/fly-control-measures

FACT SHEET 7.12

FOOD SAFETY

One of the many reasons hobby farming is so appealing is the reduced risk of foodborne illnesses since you know exactly where your food has come from and how it was handled. Foods produced at small hobby farms often have less processing than most mass-produced food that will often go through many distributors and locations before reaching your table.

ALTHOUGH HOBBY FARMING CAN SIGNIFICANTLY HELP MINIMIZE THE RISK OF FOODBORNE ILLNESS, THERE ARE STILL SEVERAL STEPS THAT SHOULD BE TAKEN TO REDUCE THIS RISK AND HELP ENSURE YOUR HOME GROWN FOOD IS SAFE TO CONSUME.

ANIMALS

Never let pets or farm animals enter areas where food is grown including vegetable gardens and fruit orchards. Waste left behind can contain disease causing pathogens that can easily mix with crops. Similarly, do not feed wild animals, including birds, near these areas.

WATER

Make sure the water you use to irrigate crops is from a safe source. Water from a municipal or public water system is generally safe to use as public water suppliers perform regular water quality testing. If you use a potable groundwater well for your water source, it is recommended that a standard water test be conducted periodically to help ensure you are using a safe water supply. It is not recommended that surface water be used on crops.

GARDEN LOCATION

Locate your edible garden away from manure storage, compost bins, septic systems, solid waste, dumpsters, animals, pets and storage areas where hazardous materials, fertilizers or pesticides are stored. Runoff, spills, or cross-contamination from any of these areas could create an unsafe food source.

COMPOST AND MANURE

Aged manure is not the same as composted manure. Although pathogens are known to die over time, it is not safe to assume that all pathogens in aged manure have been eliminated. Therefore, aged manure should be treated and handled similarly to fresh or uncomposted manures and be kept away from edible crops.

Make sure compost used in your garden has been heated to a temperature above 140˚F which is the temperature needed to destroy harmful pathogens. Do not apply fresh or aged (uncomposted) manure to edible gardens. Also, avoid using compost that contains diseased plants or plant material that has been treated with herbicides or pesticides. For more information on Composting, see Fact Sheets 4.7 and 5.5.

LEAD IN SOILS

Lead is a heavy metal that naturally occurs in soils. However, elevated levels can present a health risk, with young children being especially vulnerable. The most common form of lead exposure is through inhalation or ingestion of dust and chips from old paint containing lead, but lead can also accumulate in plants. Roots and leafy green vegetables are particularly at risk which is why soil testing is recommended. It's always a good idea to complete annual soil testing for nutrient management and most county extension soil tests include a total lead level or lead screening. Although low levels of lead in soil generally won't present a health risk, higher levels may require special precautions such as peeling root crops before consumption, removing leafy vegetables from your garden and in some cases, selecting a different area altogether for your edible garden. Contact your local NRCS extension office for assistance.

FOOD HARVEST AND STORAGE TIPS

- Always wash your hands before handling food
- Use clean, food-grade containers to place and store your harvest in
- Never harvest or handle food when you are sick
- Produce that needs refrigeration should be stored at 40˚F or lower
- Produce stored at room temperature should be stored in a cool, dry, pest-free area
- Always wash fruits and vegetables with clean water prior to preparation and consumption

BACKFLOW PREVENTION

Backflow is the reversal of the flow of water into the drinking water system. It occurs when there is a drop-in pressure, allowing for anything connected to the water system to flow back into it. For example, pesticide and fertilizer sprayers that are attached to garden faucets or hoses can release these chemicals into your clean water supply if a pressure drop were to occur (e.g., from a broken water line, or large water use nearby). This can be prevented with the use of a backflow prevention device. These are widely available at most hardware stores and should be installed on all outside faucets and hose connections to prevent water supply contamination. You may actually be obligated to have such devices under your local plumbing code. Contact your city or town hall for more information.

WATER QUALITY BENEFIT
Food safety starts with good housekeeping practices and sanitation throughout your hobby farm. Keeping a clean and well-organized hobby farm can go a long way in your overall success and help ensure that potentially harmful materials are kept out of nearby water resources.

FACT SHEET 7.13

EMERGENCY MANAGEMENT PLAN

Unexpected emergencies and disasters can impact any property, including hobby farms. These can include natural and man-made disasters such as flooding, blizzard/severe winter storm, hurricane/ severe thunderstorm, fire/lightening strike, drought, power failures, and chemical releases or spills.

DISASTERS AND EMERGENCIES SUCH AS THESE CAN HAVE DETRIMENTAL IMPACTS ON YOUR HOBBY FARM AND THE ENVIRONMENT IF NOT MANAGED PROPERLY.

The best way to prepare for such emergencies is to have an established emergency preparedness plan with response procedures in place prior to any emergency situation. Before a disaster or emergency be sure to:

- ✓ Know the warning signals in your area
- ✓ Be informed by following emergency alerts through radio, tv, internet or cell phone
- ✓ Have an emergency supply kit in place
- ✓ Know where vulnerable areas are, such as low lying areas subject to flooding, material storage areas, etc.
- ✓ Make a list of farm inventory including animals, equipment, and hazardous materials
- ✓ Keep an updated list of emergency phone numbers
- ✓ Keep a copy of your insurance coverage
- ✓ Stockpile supplies such as food for humans, feed for animals, water, fuel, lumber, sandbags, plastic sheeting, fire extinguishers and first aid kits
- ✓ Have an evacuation plan that includes an escape route and plan for moving animals if needed
- ✓ Identify areas to relocate animals, equipment, feed, fuel, generators and hazardous materials
- ✓ Identify an alternate water and power source if available and source of fire water if needed by the fire department if you are in a rural area and no fire hydrants are accessible
- ✓ Consider developing an informal mutual aid agreement with your neighbors to lend support to each other in the event of an emergency

At a minimum, your emergency management plan should be written down and stored in several accessible areas throughout your home and hobby farm, should there be an emergency. All members of your family should be familiar with the contents and practices contained in it.

Simple worksheets have been provided at the end of this section with several adapted from www.mass.gov/eea/agencies/agr/animal-health/farm-emergency-plan for your convenience. Consider using them to help develop your Emergency Management Plan.

CAUTION!
Portable generators are commonly used to provide electricity during emergencies that result in a power failure. However, operating a generator incorrectly can create a carbon monoxide, fire and/or electrical hazard that can be deadly to you or a repairman working on the lines. Visit the following link for tips on portable generator safety: www.osha.gov/OshDoc/data_Hurricane_Facts/portable_generator_safety.pdf

CLEARLY POST AN EMERGENCY CONTACT INFORMATION IN A READILY ACCESSIBLE LOCATION. THIS SHOULD INCLUDE EMERGENCY CONTACT INFORMATION FOR FIRST RESPONDERS, UTILITIES AND PEOPLE WHO MAY BE ABLE TO HELP YOU IN THE EVENT OF AN EMERGENCY.

HOBBY FARM MAP

If you haven't already done so as part of Section 3, create a map of your hobby farm. On a piece of blank paper (or graph paper if you have it) draw a simple map of your property that includes the relative location of structures, animal yards/pens, storage areas, access routes, barriers/fences, crops, pastures, nearby surface waters, drinking water well, utilities (if known), main electrical and gas shutoffs, fuel tanks including liquid propane, catch basins and the location of emergency supplies. Keep an evacuation route map with your hobby farm map.

TYPES OF EMERGENCIES AND RESPONSE PROCEDURES

List potential emergency situations that could occur in your area and the steps you will take to address the emergency. Proper emergency preparedness and response can help reduce and/or prevent harm to your family, animals, crops, and nearby water resources.

HOBBY FARM INVENTORY

Depending on the size of your hobby farm, be sure to keep an updated inventory of animals, feed locations, hazardous materials, equipment and crops. Keep in mind that you may not be present when an emergency occurs on your property, or may have a lot on your mind making it difficult to recall the details of your hobby farm. Having a list will also make it easier for a neighbor or other friend to check on things while you're not around.

EMERGENCY SUPPLIES AND SPILL KIT

Gather supplies to address a variety of emergency situations and develop a checklist/inventory of these materials and their locations. Additionally, keep a stocked spill response kit near your hazardous material storage and readily accessible in case of spills. Spill response materials should include several bags of sand, kitty litter, or other absorbent material, along with access to shovels and large containers such as trash barrels.

KEEP SPILL RESPONSE MATERIALS IN A CLOSED, STURDY PLASTIC STORAGE CONTAINER LABELED "SPILL KIT". STORE IN A READILY ACCESSIBLE LOCATION NEAR CHEMICAL STORAGE.

Recommended Supplies:

- ✓ Safety splash goggles or face shield
- ✓ Chemical-resistant coveralls
- ✓ Unlined, chemical-resistant gloves
- ✓ Chemical-resistant boots
- ✓ Broom and dustpan
- ✓ Hazardous material storage bags
- ✓ Absorbent material such as oil absorbent, cat litter, activated charcoal or sawdust
- ✓ Absorbent pads for water, oil or solvent based chemicals
- ✓ Absorbent boom
- ✓ Drums/bucket/trashcan

HELPFUL LINK

The following link provides some very useful information for emergency preparedness and even though it is for larger farms in rural communities, the information provided can easily be adapted for even the smallest urban hobby farm: www.prep4agthreats.org/All-Hazard-Preparedness/farm-emergency-preparedness-plan

CHECKLIST 7A

HOBBY FARM EMERGENCY CONTACT FORM

POLICE	911
AMBULANCE	911
FIRE	911
LOCAL / FARM VETERINARIAN	
MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION (MassDEP)	Petroleum spills over 10 gallons or any petroleum or chemical spill to a surface water or catch basin/storm drain 1-888-304-1133
POISON CONTROL CENTER (NATIONAL)	1-800-222-1222
HOSPITAL	
ASPCA ANIMAL POISON CONTROL CENTER	1-800-426-4435
EMERGENCY MANAGEMENT OFFICE	
ANIMAL FEED SUPPLIER	
NEIGHBORS	
COOPERATIVE EXTENSION SERVICE	
OUT OF STATE CONTACT	
FUEL SUPPLIER	
AMERICAN RED CROSS	
WATER COMPANY	
POWER COMPANY	
DISASTER HOTLINE	
GAS COMPANY	
PUBLIC HEALTH DEPARTMENT	
ANIMAL CONTROL OFFICER	
COMMUNICATION COMPANY (PHONE/CABLE/INTERNET)	
INSURANCE POLICY CONTACTS AND POLICY NUMBERS	
OTHER	

CHECKLIST 7B

EMERGENCY RESPONSE PROCEDURES

TYPE OF EMERGENCY	RESPONSE	EMERGENCY CONTACT
CHEMICAL OR OIL SPILL (NON EMERGENCY SMALL SPILL)	Prior to spill, prepare a spill kit (Fact Sheet 7.13). 1. Remove unnecessary people and animals from the hazard area 2. Assess the spill area for safety concerns 3. Put on at least the following: safety glasses or goggles, gloves, apron, rubber boots 4. Stop the spill • Approach the spill with the wind at your back • Turn off all sources of ignition • Remove all surrounding materials that could interfere with cleanup or could be contaminated by the spill without placing yourself or others at risk of injury • Cover any nearby floor drains and catch basins • Stop the flow by up-righting containers or plugging holes using non-sparking tools • If necessary, place leaking containers into larger containers 5. Clean up the spill: • Obtain absorbent material from the nearest spill kit and place a berm of absorbent material around the edge of the spill to keep it from spreading • Confine the spilled material into the smallest area possible • Soak up the remainder of the spill with additional absorbent material 6. Collect, label, store and properly dispose of used absorbent	911
CHEMICAL OR OIL SPILL (EMERGENCY LARGE SPILL)	Prior to spill, prepare a spill kit (Fact Sheet 7.13). 1. Evacuate the area 2. Immediately notify the Fire Department by calling 911 3. Notify MassDEP	911
FIRE	• Identify the source of water provided to the property which may be used by the fire department	911
DISEASE	• Stay on property until instructed or authorized to leave • Where appropriate, take action to limit harm to people, animals, and crops • Wear protective gear (gloves, respirators, etc.) and be careful to not expose yourself to any biological hazards • Take care not to cross-contaminate and spread biological hazards to people or animals that appear not to be exposed	911 MDAR–Division of Animal Health: 617-626-1764
FLOOD	• Ensure that chemicals, manure, and other substances that may be potentially harmful to water resources are safely transported to higher ground • Consider relocating animals to a designated evacuation area	
OTHER		

CHECKLIST 7C

HOBBY FARM INVENTORY

ANIMAL/LIVESTOCK TYPE	# OF ANIMALS	HOBBY FARM LOCATION

CROP TYPE	# OF ACRES	HOBBY FARM LOCATION

FEED TYPE	# OF BARRELS/BINS	HOBBY FARM LOCATION

ANIMAL/LIVESTOCK TYPE	# OF UNITS	HOBBY FARM LOCATION

HAZARDOUS SUBSTANCE TYPE*	AMOUNT	HOBBY FARM LOCATION

*pesticides, fertilizers, fuels, medicines, chemicals, etc.

CHECKLIST 7D

EMERGENCY SUPPLIES FORM

RESOURCE	HOBBY FARM LOCATION
NON PERISHABLE FOOD AND DRINKING WATER	
NEAREST WATER SOURCE FOR FIRE USE	
SHOVELS	
FIRE EXTINGUISHERS	
EXCAVATION EQUIPMENT	
SPILL KITS	
FIRST AID KITS	
WATER AND FEED FOR ANIMALS	
PERSONAL PROTECTIVE EQUIPMENT (E.G. CHEMICAL RESISTANT SUITS, GOGGLES, GLOVES, AND BOOTS)	
EMPTY TANKS OR CONTAINERS (TO HOLD LEAKING MATERIAL AND USED ABSORBENT CLEAN UP MATERIALS)	
SAFETY DATA SHEETS DETAILED INFORMATION REQUIRED FOR EACH HAZARDOUS CHEMICAL STORED OR USED	
BATTERY POWERED RADIO, FLASHLIGHTS AND EXTRA BATTERIES	
EMERGENCY PREPAREDNESS WRITTEN PLAN AND CONTACT INFORMATION ALONG WITH HOBBY FARM MAP, EVACUATION ROUTE AND INVENTORY	
OTHER:	

CHECKLIST 7E

HOBBY FARM MANAGEMENT AND SAFETY

Use the following questions to help guide your hobby farm's good housekeeping, operations and maintenance, safety, and emergency preparedness step:

1. Do you conduct pest management on your hobby farm?

☐ YES ☐ NO

If NO, see Fact Sheet 7.1. If YES, do you:

☐ incorporate Integrated Pest Management (IPM) into your pest control strategy?

2. Do you use pesticides or herbicides on your hobby farm?

☐ YES ☐ NO

If YES, do you:

☐ read the product labels(s) to determine the appropriate application rate(s)?

☐ contact your local Conservation Commission before applying pesticides within 100 feet of a wetland or surface water or within 200 feet of perennial rivers and streams?

☐ store material in a dry, secure location? (see Fact Sheet 7-4 for tips on storage and emergency preparedness)?

☐ follow disposal practices as directed on the product label?

3. Do you practice safe fueling and regular maintenance schedules for hobby farm equipment and tools?

☐ YES ☐ NO

If a petroleum spill of over 10 gallons occurs, or if any spill reaches a water body, catch basin or storm drain, call the fire department (911) and then call the MassDEP 24-hour spill hotline (1-888-304-1133).

4. Do you have a spill kit to quickly address small spills of hazardous materials?

☐ YES ☐ NO

If NO, see Fact Sheet 7.13 for Emergency Spill Kit Supply Checklist.

5. Do you know where you can dispose of hazardous household chemicals?

☐ YES ☐ NO

If NO, visit MassDEP's Hazardous Household Products webpage: http://www.mass.gov/eea/agencies/massdep/recycle/hazardous/hazardous household-products-handling-and-management.html. If YES, list location:

_____

6. Are all solid waste management areas:

Located on flat paved surfaces, away from storm drains and water resources?

Enclosed or in areas away from stormwater flow patterns?

☐ YES ☐ NO

If NO, list problem locations and steps that can be taken to address these areas:

_____

CHECKLIST 7E

HOBBY FARM MANAGEMENT AND SAFETY

CONTINUED

7. Does your municipality have specific regulations related to control of dust, odor, and noise?

☐ YES ☐ NO

If YES, list problem locations and steps that can be taken to address these areas:

_____

_____

_____

8. Does your hobby farm layout take precautions to minimize and avoid conflicts with neighbors?

☐ YES ☐ NO

If YES, check applicable selections:

- ☐ proper fencing installed to prevent animals from entering neighboring properties
- ☐ vegetated buffer or windbreak installed to minimize migration dust, odors, and noise
- ☐ compost and manure storage areas located downwind as far as possible from neighboring houses and yards.
- ☐ proper steps have been taken for control of rodents and other pests (see Fact Sheet 7-11).

9. Have you taken appropriate steps to ensure food safety (if applicable)?

☐ YES ☐ NO

If YES, check applicable selections:

- ☐ prevent pets and farm animals from entering garden or crop growing areas.
- ☐ locate crops away from manure, compost bins, solid waste, hazardous materials storage, etc.