

Farmstead Security:

A Security Tour of Your Farm or Ranch

A 30- to 45-Minute Lesson for Small Groups

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■ Desired Outcomes

After this program, participants will:

1. Understand where farmstead security problems may originate. Example: terrorist activity, radical environmental groups, etc.
2. Understand how the farmer, the farm family and the farm business could be vulnerable to security breaches.
3. Identify resources that would be helpful in remedying problem areas.
4. Identify potential security problems on their farm or ranch.
5. Develop a farmstead security plan with needed changes prioritized.
6. Make the needed changes in and around the farm or ranch.
7. Know that the farm and farm family are safer and less vulnerable because of the changes that were made in the farm/ranch security plan.

■ Before the Lesson

1. Read through this lesson plan and the publication Farmstead Security Checklist. Additional resources are available at www.ag.ndsu.nodak.edu
2. Obtain copies of the Farmstead Security Checklist publication for all participants from the NDSU Distribution Center, (701) 231-7882 or dctr@ndsuext.nodak.edu.
3. Make sure time, space and participant numbers are right for any planned activities involving the class.
4. Additional program activities include:
 - a. Ask participants to list or mention what their understanding is of farmstead security and the concerns they have with it.
 - b. Display other resource materials such as Gemplers and Granger suppliers.
 - c. Display a key storage cabinet, padlock or any other monitoring device.
 - d. Show other items related to a farmstead security plan.
5. Provide copies of the Farmstead Security Checklist. Ask the participants to take it home and fill it out with their family.

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■ Resources

Web sites

www.ext.vt.edu/pubs/farmsecurity

Virginia Tech, Farm Security, Virginia Cooperative Extension Service

www.uaex.edu/biosecurity/producer/farm

Farm & Home Biosecurity, University of Arkansas Cooperative Extension Service

www.agctr.lsu.edu/EDEN

Extension Disaster Education Network

PowerPoint Presentation

Farmstead Security available from the NDSU Extension Service

Publication

Farmstead Security Checklist

* Attendees sign in as they arrive for follow-up evaluation.

■ Introduction

Farmstead security has become an important aspect in today's agriculture. Not only are there terrorist concerns in agriculture, but also concerns with various environmental groups who will inflict damage to farm resources, including livestock and crops, to prove their point. These also may include people with personal vendettas or reasons to want to cause harm to another's resources or property. There also are people who are simply going after a farm or agriculture resource, such as fertilizer products, to satisfy their drug habit or bomb-making plan. No matter what the reason, it is essential to remember that these types of destructive activities can and do happen all over the country.

Ask participants to name potential problems because of a lack of security on their farm or ranch. (This is an activity that can be used depending on the group being taught).



■ Visual 1 — Farmstead Security: A Security Tour of Your Farm or Ranch

Today we will discuss why you need to secure your farm or ranch and what you can do to live and work in a secure environment.



■ Visual 2 — Why Secure Your Farm or Ranch?

Safety and security on our farms and ranches are more important than ever. It's easy to think that we're just as safe on our farms and ranches as we were in the past. The reality is that since 9/11 in New York, we're all more aware of what terrorists can do. We know that they not only target big cities, but they also could target agriculture in the United States. Various activist groups are protesting different aspects and developments within agriculture in our country, such as the large confinement livestock operations, farm chemical usage and PMU horse farms. Some of these groups protest and demonstrate in a peaceful manner and other groups are capable of and have caused physical harm to agricultural facilities and resources. Such groups potentially could hurt our food supply and our agricultural economy.



■ Visual 3 — Why Secure Your Farm or Ranch?

We are not only concerned about possible terrorists, but any individuals or groups of people meaning to do harm to our farm or ranch. Whether the threat is to our livestock herd, our crops or other resources we have on the farm, we have to be prepared, aware and ready for anything.



■ Visual 4 — Accidental Contamination

Farmstead security also is important in trying to avoid accidental contaminations of our crops, stored grain, feed, seed or livestock. According to Charles E. Wilson, Ples Spradley and Rick Cartwright from the University of Arkansas Extension, "During the investigation of these (9/11) events, it was discovered that at least one of the World Trade Center terrorists had investigated the use of a 'crop-dusting' plane for still unknown purposes." (http://www.uaex.edu/biosecurity/producer/crop_biosecurity.asp)

Accidental injury or even destruction of fields can occur when a pesticide applicator sprays the wrong herbicide by mistake. Accidental pesticide applications should be quickly noted, recorded and reported.



■ Visual 5 — Livestock

If you're a livestock producer, you need to keep a current monthly inventory of livestock supplies. You also need to have a good herd or animal identification system in place. That soon may become mandatory for all livestock operations because of BSE and other problems. Keep your feed products in a secure and locked storage facility. Keep your veterinary supplies in a secure and locked storage facility. Items such as vaccines, semen ampoules and antibiotics should be secured.



■ Visual 6 — Livestock Biosecurity

Livestock biosecurity is a major security concern. Livestock biosecurity issues will be more thoroughly addressed in another educational program. Animals and feed ingredients can become adulterated by biological means such as bacteria, by chemical means such as chemical warfare agents, by radiological means with agents delivered in various forms, and by physical means such as metals, glass or plastic products.

Major points of concern when considering animal biological security are:


1. Ensuring the physical security of building and grounds, thereby anticipating and recognizing security issues.
2. Making sure all farm and ranch visitors check in with a designated farm representative. This accounts for all unwanted or unknown visitors.

continued

3. Preventing animal infection or contamination, whether accidental or deliberate, by maintaining a vaccination program for all animals.
4. Increasing security awareness for employees at all levels.

Farmstead Security: Stored Grain

- Keep current inventory of stored grain and seed
- Show origin and destination of grain
- Keep commodity grain and seed in locked, secure storage
- Limit access to grain-handling facilities
- Restrict unknown visitors to site




■ Visual 7 — Stored Grain

Once grain is concentrated in a large storage bin, much more malicious contaminating damage can be done to grain vs. crops standing in the field. Storage bins are commonly 10,000 bu. or larger on modern farms. If you're a crops producer, keep a current, accurate and well-maintained inventory of commodity crops and seed in storage in your bins and storage buildings. Keep accurate inventory records showing origin and/or destination of the crop and the seed. Mark the bins with a numbering system corresponding to your inventory sheet. Keep your grain in secure and locked storage bins. Electronic door sensors could be installed. Make sure bins have no marking on them allowing visitors to decipher the type of product that is in the bin. Restrict access to all grain-handling facilities such as augers, grain legs, grain vacuums, wagons and trucks. Restrict visitors to the site. All it takes is a 1-gallon pailful of a contaminant dumped into the top of a bin to possibly make that bin's contents unmarketable.

Farmstead Security: GMO and Non-GMO

- Prevent contamination of GMO with non-GMO grain in field and in storage
- Separate fields
- Do not cross-contaminate field equipment
- Always separate non-GMO and GMO stored grain



■ Visual 8 — GMO & Non-GMO

Maliciously contaminating non-GMO crops with GMO or vice versa will be more of a concern as more GMO crops are grown. If you're growing GMO crops and non-GMO crops, use various measures to ensure that there is no cross-contamination from GMO to the non-GMO crops. One pailful of a GMO grain mixed into a non-GMO or vice versa would be a serious contamination problem. Locked, secure storage facilities would prevent most malicious cross-contamination activities. It also is important to select crop plots carefully to avoid contamination of either type of grain. Accurate and timely inventories of grain storages are necessary, and when possible, avoid markings on the outside of grain storage bins that allow anyone other than farm employees to know what's stored in each bin.

Farmstead Security: Chemical Storage

Keep pesticides in buildings that are...

- Locked
- Weather tight
- Heated
- Well-lit interior and exterior
- On high ground
- Down slope from wells, animal feeding areas and dwellings




■ Visual 9 — Chemical Storage

Keep all farm chemicals in a locked, secure storage facility. The main issue is prevention from human harm through exposure, whether accidental or on purpose. This is especially true for the pesticides that are highly toxic or corrosive. These could be used to contaminate water sources or foods, or be sprayed over populated areas. In some cases, it can be quite easy for an individual to maliciously contaminate a tank on a field sprayer or nurse tank with a chemical such as glyphosate. That contaminated tank can decimate thousands of acres of crop.

Farmstead Security: Chemical Storage

- Site not readily visible or accessible
- Don't store pesticides in the home
- Only store minimal quantities
- Post signs on door: "Danger - Pesticides"



■ Visual 10 — Chemical Storage

Maintain an accurate, regularly updated inventory of chemicals on hand. Separate the different types of chemicals into separate storage areas. Do not store feed and seed with chemical products. The storage facility should be weathertight, heated when necessary, lighted at the door and situated on high ground. Situate the storage down slope from wells, animal feeding yards, food and feed storage and dwellings. Storage should be situated to prevent runoff into surface or groundwater. It should not be readily visible or accessible to visitors. Put a sign on the door "Danger: Pesticides - Unauthorized Persons Keep Out." Also post phone numbers for two contact people and two emergency response agencies. Locate a building far enough from other buildings so in case of fire, the blaze would not spread to this facility.

Farmstead Security: Fertilizers

- Secure from unwelcome visitors
- Store in well lighted, highly visible area
- Don't leave in field at night
- Return empties to dealer soon



■ Visual 11 — Fertilizer

Manage anhydrous ammonia storage tanks and supplies so they are safe from theft and misuse. People making methamphetamine have stolen anhydrous ammonia from tanks sitting in fields. Anhydrous is one of the ingredients used in making meth. Store all nurse tanks in well-lighted areas secure from unwelcome visitors. Try to avoid leaving nurse tanks in fields at night. Return empty nurse tanks to the owner/distributor as they become empty. Keep partially emptied tanks in a well-lighted, secure area or an area with 360-degree visibility in an open part of a field. Lock access to nurse tank hoses and tank valves. Various types of locks are available from manufacturers and certain dealers at prices from \$62 to \$205. Laws may be enacted to require dealers and farmers who own and use those anhydrous ammonia nurse tanks to put locks on them. Remove the nurse tank hose where possible. Maintain a locked storage area for nurse tank hoses.

Farmstead Security: Fertilizers

- Lock access to hoses and valves
- Lock dry fertilizer storage
- Ammonium nitrate
- Keep trucks and trailers with product inside at night



■ Visual 12 — Fertilizer

Lock all storage buildings containing dry fertilizer products at night and when not in use. Ammonium nitrate fertilizer can be used in bomb-making processes. Keep trucks, wagons and spreaders containing dry fertilizer products indoors when not in use.

Farmstead Security: Chemical Application Equipment

- Store equipment in locked building or locked fenced area
- Remove keys and lock cabs
- Clear mixing and loading site of loose containers
- Lock access to tanks and pumps



■ Visual 13 — Chemical Application Equipment

Chemical application equipment should be stored in a locked building or securely fenced area. Lock cabs and remove keys from chemical application equipment at night or when not in use. That would include tractors, self-propelled sprayers, nurse trucks and other related equipment. Also be sure to lock access to all tanks and pumps. Sprayer tanks and nurse tanks easily can be maliciously contaminated with a herbicide, such as glyphosate, which potentially

will damage hundreds of acres of crop. The chemical mixing and loading site should be free of chemical containers when not in use. That includes full, partially emptied or emptied containers. Access to water tanks, pumps and well sites should be secured.

**Farmstead Security:
Farm and Ranch Machinery**

- Modern farm equipment expensive
- Farm machinery parked in remote fields and yards are vulnerable
- Potential damage
- Keep in safe and secure locations
- Remove keys and lock cabs



■ Visual 14 — Farm & Ranch Machinery

Modern farm machinery is very expensive. Farm tractors, combines and other equipment that are not locked or have the ignition keys left in them are vulnerable targets. This can be particularly true when parked in a remote field or an abandoned farmstead. These vulnerabilities are an invitation to people who want to conduct malicious activities and have some fun with that equipment. There have been situations where unauthorized people have started the engine on farm equipment and driven it in dangerous and damaging ways, causing thousands of dollars worth of damage. Always keep that equipment secure from malicious activity by removing keys and locking cabs. Keep the equipment in protected locations, preferably out of remote fields and uninhabited farmyards when not in use.

**Farmstead Security:
Farm Fuels and Lubricants**

- Keep up-to-date inventory
- Keep controlled access to fuels, hydraulic fluids, other farm lubricants
- Lock above-and-below ground fuel tanks
- Lock storage building with farm lubricants



■ Visual 15 — Farm Fuels & Lubricants

Maintain an accurate inventory of and controlled access to farm fuels, lubricants and hydraulic fluids. Maintain locked access to fuel storage tanks, both above and below ground. Also maintain locked access to storage buildings containing lubricants and hydraulic fluids.

**Farmstead Security:
Farm Key Cabinet**

- Control access to all keys
- Use farm key cabinet
- Keep in shop or house
- Tag all keys as to what they control



■ Visual 16 — Farm Key Cabinet

Use a farm key cabinet to control the access to keys for machinery and storage of pesticides, grain, seed and feed. The key cabinet can be kept in a machine shed, farm shop or the farmhouse. The cabinet should be locked if kept in the machine shed or shop. Tag all keys as to what they control access. You can use a code system to tag the keys either using numbers that match or a description type of tagging. The code system would tend to be more secure.

**Farmstead Security:
Farm Key Cabinet**

- Keep duplicate keys in secure locations
- All employees and family members adhere to farm key policy
- Change locks on more vulnerable areas of farm when employees leave



■ Visual 17 — Key Cabinet

Keep duplicate keys in another secure location on the farm. Train all farm employees and family members to strictly follow the farm key and key storage policy. Consider changing locks on some particularly sensitive locations on the farm or ranch when employees leave the job. It will be a big job keeping track of all keys and locks on the farm, but one prevented theft or malicious activity will make it worth doing.

**Farmstead Security:
Well Sites**

- Secure plumbing in insulated, locked pump house
- Place well connections underground
- Install concrete apron around access pipe to well
- Lock access pipe to well



■ Visual 18 — Farm or Ranch Well

Secure the water supply system for the farm or ranch by securing the plumbing in an insulated and locked pump house. Have the connections to the well placed underground. Place a concrete apron around the access pipe to the well and lock the access pipe cap to the well.

**Farmstead Security:
Farm and Ranch Yard**

- Landscape farm and house site
 - Build high fences
 - Plant tall trees and hedges
- Funnel visitors to desired locations
- Restrict potential unwarranted access



■ Visual 19 — Farm or Ranch Yard

Keep driveways and landscaping well maintained near the farm and house approach and yard so that all unknown visitor traffic is funneled to the house or other desired location to confirm their identity and purpose of their visit. This should restrict unwarranted access to facilities on the farm or ranch. Consider putting up obstructions such as high fences, tall hedges and trees to better screen the farm or ranch from high-traffic roads running past the farm. Install an electric eye or camera to better detect and announce visitors entering the farm or ranch site.

**Farmstead Security:
Farm and Ranch Yard**

- Install computer/video monitoring system
- Place monitoring cameras
- Maintain drives to direct traffic
- Have an aggressive watchdog



■ Visual 20 — Farm or Ranch Yard

Installing a computerized monitoring system seems “high tech” but is an effective way to keep watch over your farmyard and equipment. The system should be wired to the house or shop and should be connected to a computerized farm monitoring system. Keep an aggressive farm watchdog.

**Farmstead Security:
A Security Tour of Your
Farm or Ranch**

- Protect valuable assets
- Complete security checklist
- Make any needed changes



■ Visual 21

Today’s farms and ranches hold thousands of dollars worth of assets and valuable resources. As a farmer or rancher, you will want to make sure your assets and resources are secure from any kind of attack that potentially could hurt your ability to earn a living and run a successful operation.

As you now can see, farmstead security suddenly has become a much more important aspect in today’s agriculture. Not only are there new terrorist concerns in agriculture, but also concerns with various protest and extreme environmental groups who are willing to inflict damage to farm resources, including livestock, crops and other resources, to

prove their point. Then there are people with personal vendettas or reasons to want to cause harm to another’s resources or property. There also are people who fall into the category of desperation and are simply going after a farm or agriculture resource, such as fertilizer products, to satisfy their drug habit or bomb-making plan. Finally, the

destructive activities take place because some individuals decide they are going to have some fun at another person's expense.

Take some time to go through the Farmstead Security Checklist with your family and/or farm employees. Then go ahead and put into place the ideas that fit your farm or ranch operation and your farm budget and time. What are the major security concerns that you have for your own farm or ranch?

■ Evaluation

Please fill out the evaluation of this lesson and return it to the address written on it.

■ Options

- Have participants complete the post-lesson evaluation and send them to Becky Koch, Ag Communication, Morrill Hall, NDSU, Fargo, N.D. 58105-5655.
- Ask participants to look at the Farmstead Security Web sites available from other states.

