

May 6, 2009
NEWS RELEASE

UNIVERSITY OF MINNESOTA

EXTENSION

IMMEDIATE

[Master Gardener Plant Sale May 16](#)
[Foley Plant Sale June 6](#)
[4-H'ers Climb to New Heights](#)
[Operation Military Kids Youth Summer Camps](#)

FOR RELEASE: May 11, 2009

[Avoid Chilling Injury in Tender Plants](#)
[Successful Reproduction Programs on Dairy Farms](#)
[Low-impact insecticides for Minnesota gardeners](#)
[Talk to children about H1N1 \(swine\) flu](#)
[Caring for a horse on a budget](#)

Stearns County

3400 First Street North, Suite 103
St. Cloud, MN 56303-1924
320-255-6169 or 1-800-450-6171
Fax: 320-255-6167
E-mail: mnext-stearns@umn.edu

CALENDAR

- | | |
|--------|--|
| May 7 | 4-H Softball Planning Meeting
7:30 p.m.
Tri-City Christian Center, Freeport |
| May 13 | Stearns County Dairy Advisory Committee Meeting
10:00 a.m. – noon
Charlie's Café, Freeport |
| May 16 | Stearns County Master Gardener Plant Sale
8:30 a.m. – 11:30 a.m.
Riverside Park Shelter, St. Cloud |
| May 19 | ServSafe Food Manager Certification Course (pre-registration only)
9:00 a.m. – 4:30 p.m.
Midtown Office Complex, Room 108, St. Cloud |
| May 20 | Serve It Up Safely: Food Safety Manager Renewal Course (pre-registration only)
1:00 p.m. – 5:00 p.m.
Midtown Office Complex, Room 108, St. Cloud |
| May 21 | 4-H "Spring Spectacular" Federation Meeting
7:30 p.m.
Holy Family, Albany |
| May 24 | 4-H Summer Camp Planning Meeting
1:00 p.m. - 2:00 p.m.
Hillcrest, Albany |
| May 24 | 4-H Ambassador/Junior Leader Meeting
2:00 p.m. to 3:00 p.m.
Hillcrest, Albany |
| May 25 | Stearns County Extension Office – CLOSED |

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Memorial Day, Observed

- May 27 4-H Livestock PDC meeting
7:30 p.m.
Albany (specific location TBA)
- June 6 4-H Lama Clinic
9:00 a.m. - 3:00 p.m.
Benton County Fairgrounds, St. Cloud
- June 6 Benton County Master Gardener Plant Sale
8:00 a.m. - Noon
Coborns Store parking lot, Foley
- June 6 Breakfast on the Farm
7:00 a.m. - 11:00 a.m.
Jaron Nathe Dairy Farm, Melrose
- June 7 4-H Softball Fun Day
1:00 p.m.
Melrose High School Fields, Melrose (tentative location)
- June 7 4-H Silver Spurs Horse Clinic
10:00 a.m. - 5:00 p.m.
Spanier Farm, Paynesville
- June 11 4-H Advisory Board Meeting
7:30 p.m.
Spring Hill Park, Melrose
- June 15 Stearns County Extension Committee Meeting
10:00 a.m. - Noon
Midtown Office Complex, Room 108, St. Cloud
- June 15-17 4-H Summer Camp I (grades 3-5)
Sand Dunes State Forest, Big Lake/Zimmerman
- June 17-19 4-H Summer Camp II (grades 6-8)
Sand Dunes State Forest, Big Lake/Zimmerman
- June 23 4-H Favorite Food Show and Demonstration Day
4:00 p.m. – 6:30 p.m.
Holy Family, Albany
- June 25 4-H Day Camp Adventure – Holdingford
9:00 a.m. – 3:00 p.m.
Elementary School Playground, Holdingford
- June 25-26 4-H Silver Spurs Horse Clinic
8:30 a.m. – 5:00 p.m.
Hingeveld Training, Melrose

June 30 4-H Day Camp Adventure – Sartell
9:00 a.m. – 3:00 p.m.
Val Smith Park, Sartell

July 3 Stearns County Extension Office – CLOSED
Independence Day, Observed

July 7 4-H Day Camp Adventure – Cold Spring
9:00 a.m. – 3:00 p.m.
Frogtown Park, Cold Spring

July 8 Stearns County Dairy Advisory Committee Meeting
10:00 a.m. – noon
Charlie’s Café, Freeport

July 9 4-H Day Camp Adventure – Paynesville
9:00 a.m. – 3:00 p.m.
Paynesville Elementary Playground, Paynesville

From: Carl F. Hoffman, Extension Horticulturist
University of Minnesota Extension
Stearns and Benton Counties

Release Date: May 11, 2009

Contact: Carl Hoffman
(320) 255-6169; (800) 450-6171



Avoid Chilling Injury in Tender Plants

By Carl Hoffman, University of Minnesota Extension

ST. CLOUD, Minn. (5/6/2009) — Judging from the number of questions I have been receiving, people are getting very anxious to transplant annual flowers and vegetable plants outdoors. It is still too early to transplant many of these tender plants outdoors even if there is no frost predicted. Chilling injury can stunt plants so that they never do perform up to their potential all season. In addition, cool, wet soils encourage root rot which not only stunts, but often kills the plants. I just lost two flats of celosia plants that I was hardening off in an unheated garage to root rot.

David Zlesak, Regional Extension Horticulturist, wrote the following article in the May 1, 2007, issue of *Yard and Garden Line News*. In this article, he cites the reasons to avoid chilling tender plants.

Is frost predicted tonight or in the extended forecast? This is an ongoing question that keeps gardeners glued to the local weather forecast, especially during April and May. For most of us, the answer strongly influences our gardening activities and priorities. It can help us determine if we will hold off on planting frost sensitive transplants, or whether we need to declare a gardening emergency and rush out to cover frost sensitive transplants already in the ground. Fluctuating spring temperatures may even set us to protecting established favorites already in active growth in order to avoid damage to flower buds and tender new foliage. Unfortunately, freezing damage (ice crystal formation that can rupture plant cells) is not all we should be concerned with. Chilling injury is also possible and is something gardeners rarely consider. Chilling injury is common especially on warm season annuals and plants from tropical and subtropical regions. Chilling injury can occur at temperatures from near freezing (32°F) up to about 45 to 50°F.

Typical symptoms include overall slowed or stunted growth; watersoaked, wilted or dead regions on leaves, flowers, and fruit; and altered texture or flavor of susceptible fruits. Symptoms of chilling injury, especially stunted or slowed growth, can go undetected or be confused with other potential causes. Symptoms of chilling injury vary based on susceptibility of plant species and plant tissue, the degree of acclimation of plant tissue, the exact temperature(s) encountered, and the duration of exposure to chilling temperatures. Chilling injury is common in Minnesota especially in bedding plants during stretches of cool spring temperatures and especially cool nights. It is also common in Minnesota with tropical or sub-tropical fruits and potted plants during winter months and primarily occurs when the plants are in transit. Plants may or may not recover from chilling injury depending on how much damage has occurred.

Unfortunately, many gardeners trying to get a head start on the growing season by planting their warm season bedding plants early may actually lose the advantage of an extended growing season as plants use precious time trying to recover from chilling injury. Commonly grown plants that are particularly sensitive to chilling injury include tomatoes, peppers, squash, dahlias, and impatiens. In fact, sometimes early planting may result in such delayed growth from chilling injury that smaller, later planted transplants may surpass earlier planted transplants suffering from chilling injury. I have especially noticed this with squash. The squash I direct

seeded in the garden in late May have typically outgrown my earlier transplanted squash seedlings even though I try to protect my transplants from cold nights and chilling injury.

From: Carl F. Hoffman, Extension Horticulturist
University of Minnesota Extension
Stearns and Benton Counties

Release Date: IMMEDIATE

Contact: Carl Hoffman
(320) 255-6169; (800) 450-6171



Master Gardener Plant Sale May 16

By Carl Hoffman, University of Minnesota Extension

ST. CLOUD, Minn. (5/6/2009) – Perennials, flowering annuals, vegetable plants, houseplants, heirloom plants, and more will be on sale at a huge plant sale on Saturday, May 16, at Riverside Park Shelter, 1725 Kilian Boulevard Southeast in St. Cloud. Riverside Park Shelter is located south of Munsinger and Clemens Gardens in southeast St. Cloud. The sale will begin at 8:30 a.m. and will last until 11:30 a.m. unless all the plants are sold earlier. There will be no early sales.

The plant sale is sponsored by the Stearns County Master Gardeners. The master gardeners have grown all of the plant material that will be sold at the sale. Master gardeners will be present to answer your gardening questions and assist you in selecting plants. The proceeds of this sale will be used for educational and beautification projects in the county.

If you are looking for perennials to add to your border, flowering annuals for beds or containers, plants for your woodland or prairie gardens, vegetable plants for your garden or houseplants to brighten the interior of your home, don't miss this sale! There will be a lot of good quality plants for sale at reasonable prices. Mark May 16 on your calendar and come when the sale opens for best selection.

From: Carl F. Hoffman, Extension Horticulturist
University of Minnesota Extension
Stearns and Benton Counties

Release Date: IMMEDIATE

Contact: Carl Hoffman
(320) 255-6169; (800) 450-6171



Foley Plant Sale June 6

By Carl Hoffman, University of Minnesota Extension

ST. CLOUD, Minn. (5/6/2009) – If you are looking for annuals for your beds, borders or containers, perennials to replace those lost during the winter or want to add some new specimens, vegetable plants for your garden, houseplants to brighten the interior of your home or maybe some woody plants for the shrub border, the Foley Garden Club and Benton County Master Gardener Plant Sale will have what you need. The plant sale will begin at 8:00 am. on Saturday, June 6, in the parking lot of Coborn's in Foley and will end at noon unless the plants are sold out earlier.

The members of the Benton County Master Gardeners and the Foley Garden Club have grown all the plant material that will be sold at the sale. They are all avid gardeners and have new varieties as well as the old favorites. Members of these two organizations and the Extension Horticulturist will be present to answer your gardening questions and assist you in selecting plants. The proceeds of the sale will be used for educational and beautification projects in the county.

There will be a lot of good quality plants for sale at reasonable prices. Mark June 6 on your calendar and come early for best selection.

From: JoDee Christianson, 4-H Program Coordinator
University of Minnesota Extension
Stearns County

Release Date: IMMEDIATE

Contact: JoDee Christianson
(320) 255-6169; (800) 450-6171



4-H'ers Climb to New Heights

By JoDee Christianson, University of Minnesota Extension

ST. CLOUD, Minn. (5/6/2009) – On May 1 & 2 thirty-five youth participated in the regional 4-H Camp Counselor Training held at Camp Friendship in Annandale. 4-H'ers from Benton, Sherburne, Stearns, and Wright Counties participated in the two day training. Stearns County had 10 youth that participated. They attended this training in preparation for their role as a camp counselor at the Stearns County 4-H Summer Camp that will be held this summer at the Sand Dunes State Forest by Zimmerman, June 14–19.

Throughout the training, participants learned the importance of their leadership role at camp, along with basic first aid, conflict resolution, and ages & stages of youth development as well as other camping specific training on campfire, recreation, song leading, and crafts. Information they received throughout this training will help prepare them for the time they will spend with the campers, who range in ages from 8-14.

While the majority of time is spent on preparing counselors for just about any situation that can come their way at camp, the second part of the training really focuses on the development of the counselor personally through team building and personal growth challenges. 4-H'ers participate in several challenges both on the ground and on a high ropes challenge course. This year Stearns County participants had to scale a 30 foot X-climb that consisted of two free swinging ropes crossed in a large X-pattern secured between two poles. Each participant was asked to challenge themselves personally and to set a goal they would like to accomplish whether it be climbing up to the top at 30 feet or just one foot off the ground. They were then securely tied into a harness and began the climb where they put their full trust in their teammates that held on to the other end of the rope. It takes complete cooperation and determination to accomplish the goals that they set out for themselves. It is great experience that really helps boost confidence and self-esteem. It also gives them the comfort in knowing that they have a team of people behind them, a support system that they can trust to be there for them as challenges arise, not only as a camp counselor, but also in everyday challenges. A strong bond forms between the counselor team, starting at the training and carrying on through their 4-H career.



Christina Sand and Stephanie Loecken celebrate with a high five after reaching the top of the 30 ft X- Climb.

For more information on how to get involved in 4-H or summer programming call 1-800-450-6171.

From: Eric Sonnek, Extension Educator
University of Minnesota Extension
Stearns, Benton & Morrison Counties

Release Date: May 11, 2009

Contact: Eric Sonnek
320-255-6169; 1-800-450-6171



Successful Reproduction Programs on Dairy Farms

By Eric Sonnek, University of Minnesota Extension

ST. CLOUD, Minn. (5/6/2009) – One of the biggest challenges on any dairy farm is a successful reproduction program. Many aspects of a dairy enterprises bottom line are affected by the reproduction program that it should be high on a list of priorities on any and all dairy farms. For example shorter calving intervals mean more peak production since the animals are calving more often. More calves mean more heifers and more replacements in future years. Many breeding programs exist today that are easy to follow as well as economical for the well managed dairy.

Some people feel that just running a bull with the cows will help get these cows pregnant faster. Sometimes it may work but if you have a bull that is infertile your entire herd will go unbred until you realize this. This is a huge loss of income and very stressful to you. Also with bulls there is always a safety concern. Bulls are very unpredictable and even the most docile bull can turn on the owner, a family member, or an employee.

Research has shown cows sired by bulls from Artificial Insemination (AI) companies are about \$148 dollars more profitable than cows sired by herd bulls. Multiply that out across all the cows in your herd it adds up quick. Also by using AI bulls, you can choose which traits you like to improve in your herd like mammary systems, feet and legs, or any production traits.

Many AI companies do provide service technicians that can help with the breeding of the cows and can even train you to breed your own cows. Some even have a service that does the heat detection as well as breeding for you. Many have appreciated this option as it is one thing less that they have to actively manage on their farm since the companies can do it with great success using timed breeding, chalking, or both.

Managing an AI program is a job that requires dedication and timeliness. Used to be the easiest way to determine when a cow should be bred was to watch for standing heat or secondary signs of heat like riding others and clear discharge. This is still an excellent way to determine cows in heat. You should set a time to watch cows for heat at least a half hour each day. Once you determine a cow is in heat you want to breed her about 8-12 hours after standing heat. A good rule of thumb is if you see them in heat in the morning, you should breed them in evening and vice versa.

Heat synchronization programs are fast catching on as a way to breed cows. There are many different programs out there but they all involve using a prostaglandin injection like Lutalyze. Give the animals you want to breed a prostaglandin shot and heat detect and breed 2-5 days after the injection. Any animal that did not show a heat, administer another prostaglandin shot 8 days after the first. One thing to note using this program is that an animal must be cycling for the program to work.

Ovulation Synchronization programs involve using both prostaglandins and GnRH (Gonadotropin Releasing Hormone) injections. On day 1, give a GnRH shot. On day 8 administer a Prostaglandin injection, GnRH

again on day 10 and the breed 8-18 hours later. This program has shown excellent results in cows but heifers do not seem to do as well because of different follicular waves.

A more recent technology in breeding programs is the use of CIDR's. CIDR stands for controlled internal drug release. You insert the CIDR, give a prostaglandin injection 6 days later and remove the CIDR on day 7. Then you can use heat detection and breed. CIDR's are shown to do an excellent job on cows that are not cycling yet or not showing any sign of estrus.

For more information on any of these technologies you can easily search the web for more information as well as speak to you local veterinarian or other livestock professional. More pregnant cows mean higher milk yields as well as more heifers which directly affects your profit on your dairy enterprise.

Media Contact: Catherine Dehdashti, U of MN Extension
(612) 625-0237; ced@umn.edu

Release Date: IMMEDIATE

Operation Military Kids Youth Summer Camps

Young people who are currently impacted by a deployment, or who have a loved one in the military, have an exciting opportunity to participate in five summer camping opportunities in Minnesota made available through Operation Military Kids.

This will be a great time to meet other young people with similar experiences and stories and to enjoy the great outdoors while at camp! Youth who are ages 8-12, can attend one of three “Boots On” camps sponsored by Operation Military Kids. At the “Boots On” camps, youth are also encouraged to bring a non-military friend along, while they experience the same type of deployment preparations their loved one experiences – such as completing paperwork and doing physical fitness training. The “Boots On” camps will be offered at three different locations:

June 13-14 at Camp Patterson near Mankato
June 20-21 at Camp Esquagama near Biwabik
July 11-12 at Camp Koinonia near Annandale

Two “Teen Camps” will be offered for youth ages 13-16. The focus of the camps will be team building and communication skills, which will be developed through participation in challenge activities such as a ropes course. The “Teen Camps” will be offered at two locations:

June 26-28 at Camp Shamineau near Motley
July 19-21 at Ironwood Springs Ranch near Stewartville

Campers will enjoy traditional camp activities such as campfires, crafts, canoeing and cabin-living. There will be no registration fee for participants to attend these camps. Registration information is available by going to www.operationmilitarykids.org – click on State Information – then MN and you will find it under the News/Events section. Memories created at summer camps last a life time.

Source: Jeff Hahn, Entomologist
University of Minnesota Extension

Release Date: May 11, 2009

Media Contact: Catherine Dehdashti, U of MN Extension
(612) 625-0237; ced@umn.edu

Low-impact insecticides for Minnesota gardeners

By Jeffrey Hahn, *U of M Extension*

ST. PAUL Minn. (5/4/2009) — Now that we have left the doldrums of winter behind us, the promise of a new growing season beckons. Although we hope we don't encounter insect pests, we should be prepared to act if it becomes necessary. When using integrated pest management (IPM), we explore any non-chemical methods that could be effective first. However, there may times when some of us may need to consider applying an insecticide in our garden or yard.

The following is a list of common garden and yard insecticides that homeowners may find in stores. This is not a list of every insecticide available to home gardeners, but includes many of the low-impact and most common active ingredients. The listing of any specific trade names is not meant as an endorsement of these products but to just point out examples of pesticides with a particular active ingredient.

When examining product labels, look carefully for the active ingredient, which is often in small lettering. Examine product labels carefully to be sure the plant you wish to treat is listed on it and the product is used correctly.

Bacillus thuringiensis (B.t.) variety *kurstaki* is a naturally occurring bacterial disease of insects. It is specific to caterpillars (butterfly and moth larvae). It is a stomach poison, killing insects after they have consumed it. It is most effective against young larvae. Examples include Bonide Bacillus Thuringiensis (BT), Hi-Yield Dipel Dust, and Green Light Dipel Dust.

Horticulture oils are either derived from petroleum oil, plant oils (typically derived from the seeds), or even fish oils. Oils are used to suffocate certain insect and mite eggs. It can also suffocate certain immature and adult insects, especially soft-bodied ones like aphids and scale crawlers, as well as mites. Examples include Bonide Mite-X (cottonseed oil, clove oil, garlic extract) and Ortho Volck oil spray (petroleum oil)

The active ingredient of **insecticidal soap** is listed as potassium salts of fatty acids. They are generally effective against small, soft-bodied insects, such as aphids. They are usually believed to affect insects by penetrating and disrupting the cell membranes. Examples include Bonide Insecticidal Soap, Natural Guard Insecticidal Soap, and Garden Safe Insecticidal Soap.

Neem and Neem Derivatives are derived from the neem tree, a plant found in arid tropical and subtropical areas. There are many compounds that can be synthesized from neem and different extraction methods can produce different products. Neem products are generally divided into one of three groups: azadirachtin-based products, neem oil-based products, and neem oil soap products. Neem can deter insect pests by inhibiting their feeding, repelling them, or disrupting their life cycle by preventing them from successfully molting. Neem is generally effective against a wide array of insects, such as aphids, caterpillars, beetles, leafminers, and thrips. Examples include Green Light Fruit Tree Spray and Green Light Neem II.

Pyrethrins are made from the ground flower blossoms of the chrysanthemum plant, especially *Chrysanthemum cinerariaefolium*. It is a fast-acting contact insecticide that affects the nervous system, paralyzing the insect. Some products may be mixed with a synergist, that is, a product that makes the pyrethrins more effective, although by itself it does not have any insecticidal properties. This insecticide is effective against a wide spectrum of insects. Examples include Bonide Japanese Beetle Killer and Garden Safe® Brand Rose & Flower Insect Killer.

Spinosad is produced by the fermentation of a soil-dwelling bacterium, *Saccharopolyspora spinosa*. It is quick acting, attacking the nervous system of insects. It is most effective against caterpillars, flies (mostly leafminers), and thrips and is also reasonably effective against leaf beetles and grasshoppers and similar insects that consume a lot of foliage. Examples include Garden's Alive Bulls-Eye™, Bonide Captain Jack's Deadbug Brew, and Green Light Lawn and Garden Spray.

For additional insecticide options, view the Yard & Garden News on the University of Minnesota Extension website at <http://www.extension.umn.edu/gardeninfo/>. Look for the article titled 'A Brief Survey of Insecticides Available to Minnesota Gardeners' in the April issue.

Any use of this article must include the byline or following credit line:
Jeff Hahn is an entomologist with University of Minnesota Extension.

Source: Minnell Tralle, Parenting Educator
University of Minnesota Extension

Release Date: May 11, 2009

Media Contact: Catherine Dehdashti, U of MN Extension
(612) 625-0237; ced@umn.edu

Talk to children about H1N1 (swine) flu

ST. PAUL, Minn. (5/4/2009) — It is nearly impossible to turn on the TV or radio or pick up a paper without hearing about the newest strain of influenza. As adults, we listen for facts and try to understand and calculate our actual risks. How do our children perceive these news reports? What can we say to them to keep their fears in check? How do we protect them?

As parents we need to reassure our children and make sure they understand the factual information. We need to listen to their questions and fears. We need to make sure they understand what they can do to prevent illness. This is a good time to reinforce good health and hygiene behaviors and to practice them yourself as a good role model.

The information coming from a variety of sources is consistent. To prevent the spread of the virus, follow the recommended steps of health hygiene:

- **Cover your mouth and nose.** Cover your mouth and nose with a tissue when coughing or sneezing. It may prevent those around you from getting sick.
- **Clean your hands.** Washing your hands often will help protect you from germs. Alcohol based hand cleansers are also effective.
- **Avoid touching your eyes, nose or mouth.** Germs are often spread when a person touches something that is contaminated with germs and then touches his or her eyes, nose, or mouth.
- **Practice other good health habits.** Get plenty of sleep, be physically active, manage your stress, drink plenty of fluids, and eat nutritious food
- **Avoid close contact.** Avoid close contact with people who are sick. When you are sick, keep your distance from others to protect them from getting sick too
- **Stay home when you are sick.** If possible, stay home from work, school, and errands when you are sick. You will help prevent others from catching your illness.

Find out from your children what questions they have and answer them factually. Ask what they have heard from TV or from other children and address their fears. Help them to understand that this virus is much like almost any other flu they may have had and that most people recover. They should also know that there are entities in place that are doing their job to prevent this from becoming a widespread outbreak. Schools are exercising caution to prevent this from quickly spreading among their student population.

If your children seem to be extremely fearful about this, you may want to limit their media exposure. Seeing a lot of people wearing masks may be frightening especially for young children. Your attitudes as parents can also send a message to your children about the severity of the situation. Are you remaining calm, are you panicky or are you dismissing the information?

If you see symptoms in your children, call your doctor or clinic and keep them home from school or daycare until you can confirm the source of their symptoms.

More information is available from University of Minnesota Extension at www.extension.umn.edu/flu.

Source: Minnell Tralle, parenting educator with University of Minnesota Extension

Source: Krishona Martinson, Equine Specialist
University of Minnesota Extension

Release Date: May 11, 2009

Media Contact: Catherine Dehdashti, U of MN Extension
(612) 625-0237; ced@umn.edu

Caring for a horse on a budget

By Krishona Martinson, University of Minnesota Extension

ST. PAUL, Minn. (5/4/2009) — Owning a horse is a major responsibility, and a significant investment of both time and money. Most owners do not generate income from their horse, but are intent on spending time with their equine companion.

During tough economic times, horse owners need to explore and implement options to reduce costs. There are several things horse owner can do to minimize costs associated with horse management.

Housing. Healthy horses thrive outdoors and only require shelter from adverse weather, including excessive heat or cold (below 18 degrees), and freezing rain. Keeping a horse outdoors with access to a loafing or run-in shed saves the cost of building and maintaining a barn as well as labor expenses associated with stall cleaning. It is usually more cost efficient to keep a horse on the owner's property/farm compared to boarding. Boarding is necessary for some horse owners, but can be expensive.

Cleanliness. Flies, mosquitoes and ticks are responsible for a number of bacterial and viral diseases of horses. Reduce the risk (and expense) of these diseases by discouraging these insects and ticks in your horse's environment.

Safety. Improving barn safety can prevent accidents and unnecessary injuries.

Bio-security. To reduce the risk of some diseases, consider having visitors wash hands and change boots and clothing before and after handling horses.

Breeding. Unless a mare or stallion has exceptional conformation and an outstanding performance record, planning a foal that realistically may be difficult to market is expensive and unwise for those on a reduced budget.

Routine care and planning. Have a good working relationship with a veterinarian. It is important to determine the extent and financial commitment a horse owner can maintain. These decisions should be made prior to an emergency involving a horse. During an emergency, it is common for horse owners to approve procedures they cannot really afford. Communicating the emergency plan to a veterinarian will help keep care and after-care affordable. There are many benefits of a yearly veterinary examination.

Research has shown that taking an active interest, and being involved with the daily care of a horse results in a healthier horse and reduced veterinary care costs. Become familiar with horse vitals (temperature, heart rate, etc...) and normal behavior. Changes in baseline vitals and behavior are usually early indicators of illness.

Learn to give intramuscular shots, oral medications, and basic leg wrapping techniques. Work with a farrier to set a hoof care schedule based on how much hoof the horse typically grows.

Feeding. With feed costs rising, it is important to utilize feed efficiently. Nutrient requirements for horses depend on their physiological status (age, metabolism, weight) and their level of production (maintenance, growth, exercise, reproduction, and lactation). Most horse owners over feed their horses, leading to wasted money and unhealthy, overweight horses. Removing unnecessary grain from diets can lead to substantial savings. Regardless of the horse, forage should be the backbone of a horse's nutrition program and should comprise at least 50 percent of their diet. During summer months, utilize pasture as an affordable way to meet a horse's nutritional requirements.

Reducing costs associated with horse ownership takes hard work and some creativity. Most cost reducing opportunities fall in the area of preventative medicine, education, and taking on the responsibilities of horse ownership. These suggestions represent a sampling of recommendations. To view the entire factsheet, go to www.extension.umn.edu/horse.

Any use of this article must include the byline or following credit line:
Krishona Martinson is an equine specialist with University of Minnesota Extension