



Agricultural Newsletter

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Early Weaning Provides Boost for Young, Thin Cows

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The common tradition for weaning spring-born calves is to wait until late October and even early November. Most mature cows that have been feeding on adequate summer forages will be in very good body condition, despite the pressure of nursing a rapidly growing calf. These cows will usually be in a body condition score of about 5 to 6 at weaning time each fall. However, very often two-year-old cows and even some three-year-old cows will be in marginal body condition at the end of summer. They have a nutrient requirement for continued growth and in the case of the two-year-old, they are replacing baby teeth with adult teeth and are not as effective at harvesting forage. Therefore many of these young cows go into the fall season in a body condition score of 4 to 5 or less.

If the rancher chooses to wait until late October to wean the calves from these marginal young cows, there is very little time between weaning and the first killing frost. This is a time when a young cow could recover considerable body condition, if she has access to a plentiful supply of late summer, warm season grass. Without the nutrient drain of producing and delivering milk, she can use this pre-frost period to great advantage and replenish her own body stores.

South Dakota State examined this scenario (using mature cows) by comparing the effect of weaning date on performance of the beef cows. They weaned half of the cows at the time of the first real cool spell (September 14). The other half of the cows had their calves weaned at a traditional time (October 23). The scientists then monitored body condition and rebreeding performance of the cows. We should note that this study included two different nutritional levels: a low group to mimic an early winter or a dry summer; a moderate group to mimic more ideal summer and early winter seasons. Only the data for those cows exposed to the

low nutritional group are presented here. They more nearly reflect what may happen for 2 and 3 year olds than will the moderately fed mature cows.

Table 1. South Dakota study of earlier weaning on mature cows (source: Pruitt and Momont; 1994 South Dakota Beef Report)

Weaning time	September 14	October 23
December body condition	+5	-----
% cycling 1st 21 days of breeding	83	74
% pregnant to 21 day AI	70	35
Average conception date	June 26	July 3

This data indicates that the 40 days earlier weaning allow the cows to regain 1/2 of a body condition score going into winter. More of the early weaned cows were cycling at the start of the breeding season, conceived early in the breeding season and should wean heavier older calves the following year. In addition a small amount of high protein supplement (i.e. cottonseed meal or soybean meal) will enhance the cow's ability to utilize the declining quality of the late summer forage. Therefore this protein supplement can add more body condition to the young cows before frost arrives. This combination of management techniques should be a cost effective way to increase re-breeding rates of young spring calving cows.

The data from the cows that were in the "moderate" group indicate that middle-aged (4 to 7 years of age) in excellent body condition in the fall did not significantly benefit from the earlier weaning.

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Planting Date and Seed Treatment Affect Wheat Diseases and Insect Pests

Approximately 40 to 60% of the winter wheat in Oklahoma is sown with the intent of being used as a dual-purpose crop. In this system wheat is grazed by cattle from late October to early March and harvested for grain in early summer. In a grain-only system, wheat is generally planted in October, but in a dual-purpose system wheat is planted in early to mid-September to maximize forage production. Planting wheat this early significantly increases the likelihood that diseases such as wheat streak mosaic virus, high plains virus, the aphid/barley yellow dwarf virus complex, and root and foot rots will be more prevalent and more severe.

Wheat streak mosaic virus (WSMV), the high plains virus (HPV), and Triticum mosaic virus (TrMV):

WSMV and HPV are transmitted by the wheat curl mite (WCM). Within the last 2-3 years, Dr. Dallas Siefers with Kansas State University at Hays, KS identified a third virus, TrMV that also is transmitted by the WCM. TrMV causes the expression of symptoms similar to those caused by WSMV and HPV. WCMs and these viruses survive in crops such as wheat and corn, as well as many grassy weeds and volunteer wheat. In the fall, WCMs spread to emerging seedling wheat, feed on that seedling wheat, and transmit the virus to the young wheat plants. Wheat infected with WSMV, HPV, or TrMV in the fall is either killed by the next spring or will be severely damaged. No seed treatments are effective in controlling these viruses. However, planting later in the fall (after October 1 in northern OK and after October 15 in southern OK) and controlling volunteer wheat are two practices that provide some control. It is critical to completely destroy volunteer wheat at least two weeks prior to emergence of seedling wheat because WCMs have a life span of 7-10 days. Thus, destroying volunteer wheat at least two weeks prior to emergence of seedling wheat should greatly reduce mite numbers in the fall. In addition to these cultural controls, two winter wheat varieties (RonL from Kansas and Mace from Nebraska) now have resistance to WSMV; however, their adaptation to production in Oklahoma is not known. For more information on WSMV and HPV, see OSU Extension Facts 7636 or go to the Plant Disease & Insect Diagnostic Laboratory web page at: <http://www.ento.okstate.edu/ddd/hosts/wheat.htm>.

Aphid/barley yellow dwarf virus (BYDV) complex:

BYDV is transmitted by many cereal-feeding aphids. Fall infections by BYDV are the most severe because the virus has a longer time to damage the plant as compared to infections that occur in the spring.

Several steps can be taken to help control BYDV. First, a later planting date (after October 1 in northern Oklahoma and after October 15 in southern Oklahoma) helps to reduce the opportunity for fall infections. Second, some wheat varieties (e.g., 2174, Duster, Endurance, Overlay) seem to tolerate aphids and/or BYDV better than other varieties; however, be aware that no wheat variety has absolute resistance to the aphid/BYDV complex. Third, control the aphids that transmit BYDV. This can be done by applying contact insecticides to kill aphids, or by treating seed before planting with a systemic insecticide. Unfortunately, by the time contact insecticides are applied, aphids frequently have already transmitted BYDV. Systemic seed-treatment insecticides including Gaucho (imidacloprid) and Cruiser (thiamethoxam) can control aphids during the fall after planting, but in some years aphids are sparse in the fall and planting insecticide-treated seed in a year with no or sparse aphids in the fall would not be as beneficial as in years when aphids are numerous. Be sure to thoroughly read the label before applying any chemical. For more information on the aphid/barley yellow dwarf virus complex, go to the web page for the Plant Disease and Insect Diagnostic Laboratory at: <http://www.ento.okstate.edu/ddd/hosts/wheat.htm>.

Hessian fly: Hessian fly infestations occur in the fall and spring. Fall infestations arise from over-summering pupae that emerge when climate conditions become favorable. Delayed planting (after October 1 in northern Oklahoma, and after October 15 in southern Oklahoma) can help reduce the threat of Hessian fly, but a specific “fly free date” does not exist for most of Oklahoma as it does in Kansas and more northern wheat-growing states. This is because smaller, supplementary broods of adult flies emerge throughout the fall and winter. Some wheat varieties are either resistant (e.g. Duster) or partially resistant (e.g. Shocker, 2174, Chisholm, Centerfield, Ike, OK 102 and Okfield) to Hessian fly infestations. Hessian fly infestations can be reduced somewhat by destroying volunteer wheat in and around the field at least two weeks prior to emergence of seedling wheat. Seed treatments that contain midacloprid or thiamethoxam will also help reduce fly fall infestations, especially if combined with delayed planting and volunteer destruction.

Root and foot rots: These include several diseases caused by fungi such as dryland (Fusarium) root rot, Rhizoctonia root rot (sharp eyespot), common root rot, take-all, and eyespot (strawbreaker). Controlling root and foot rots is difficult. There are no resistant varieties, and although fungicide seed treatments with activity toward the root and foot rots are available, their activity usually involves early-season control or suppression

rather than control at a consistently high level throughout the season. Often, there also are different “levels” of activity related to different treatment rates, so again, CAREFULLY read the label of any seed treatment to be sure activity against the diseases and/or insects of concern are indicated, and be certain that the seed treatment(s) is being used at the rate indicated on the label for activity against those diseases and/or insects. Later planting (after October 1 in northern Oklahoma and after October 15 in southern Oklahoma) also can help reduce the incidence and severity of root rots, but planting later will not entirely eliminate the presence or effects of root rots. If you have a field with a history of severe root rot, consider planting that field as late as possible or plan to use it in a “graze-out” fashion if that is consistent with your overall plan. For some root rots, there are specific factors that contribute to disease incidence and severity. For example, a high soil pH (>6.5) greatly favors disease development of the root rot called take-all. OSU soil test recommendations factor in this phenomenon by reducing lime recommendations when continuous wheat is the intended crop. Another practice that can help limit take-all and some of the other root rots is the elimination of residue. However, elimination of residue by tillage or burning does not seem to affect the incidence or severity of eyespot (strawbreaker). For more information on wheat root rots, take-all and eyespot (strawbreaker), see OSU Extension Facts F-7622 or go to the web page for the Plant Disease and Insect Diagnostic Laboratory at: <http://www.ento.okstate.edu/ddd/hosts/wheat.htm>.

Seed treatments: There are several reasons to consider planting treated seed including:

1. Control of common bunt (also called stinking smut) and loose smut. The similarity of these names can be confusing. Both affect the grain of wheat, but whereas common bunt spores carryover on seed or in the soil, loose smut carries over in the seed. Seed treatments are highly effective in controlling both diseases. If common bunt was observed in a field and that field is to be planted again with wheat, then planting certified wheat seed treated with a fungicide effective against common bunt is strongly recommended. If either common bunt or loose smut was observed in a field, grain harvested from that field should not be used as seed the next year. However, if grain harvested from such a field is to be used as seed wheat, treatment of that seed at a high rate of a systemic or a systemic + contact seed treatment effective against common bunt and loose smut is strongly recommended. For more information on common bunt & loose smut, see: <http://www.entopl.okstate.edu/ddd/hosts/wheat.htm>, consult the “2009 OSU Extension Agents’ Handbook of Insect, Plant Disease, and Weed

Control (OCES publication E-832),” and/or contact your County Extension Educator.

2. Enhance seedling emergence, stand establishment and forage production by suppressing root, crown and foot rots. This was discussed above under “Root and Foot Rots.”

3. Early season control of the aphid/BYDV complex and Hessian fly. This can be achieved by using a seed treatment containing an insecticide.

4. Control fall foliar diseases including leaf rust and powdery mildew. Seed treatments are effective in controlling foliar diseases (especially leaf rust and powdery mildew) in the fall, which may reduce the inoculum level of these diseases in the spring. However, this control should be viewed as an added benefit and not necessarily as a sole reason to use a seed treatment.

5. Partial control of Hessian fly. This was also discussed previously. Often a combination of chemicals is present in seed treatments, which can include a combination of fungicides for a broader spectrum of activity, or a combination of fungicides with an insecticide so activity against diseases and insects is achieved. One such seed treatment is Gaucho XT, which is composed of an insecticide and fungicides so control of aphids (and hence BYDV), Hessian fly, wireworms, smuts and bunts, and seedling root rots is available in one treatment (Table 1). Other seed treatments such as Raxil MD, Dividend Extreme and Charter PB contain only fungicides, but can easily be mixed with an insecticide such as Gaucho 600 or Cruiser to obtain activity against bunts, smuts and seedling root rots as well as insects. Therefore again, I would emphasize that if a seed treatment is used, **be sure to carefully read the label to ensure that the treatment is intended (and labeled) for your desired goal, and that it is applied at a rate labeled for the desired activity.**

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Starting Wheat Pasture Stockers

Gene Parker Jr, D.V.M.

As September arrives, the days get shorter and the weather usually starts to cool off some from the blistering days of summer, it is time for many of you to start thinking about buying and starting stocker calves for wheat pasture. Wheat pasture grazing has been reduced the past couple of years due to dry fall and winter growing conditions and high grain prices. There should be more interest in grazing stockers on wheat this coming fall due to decreasing wheat prices (\$4.70/bushel in July 2009) and the reminder of risk management from grain crop failures due to late season freeze damage. Proper processing and starting can eliminate a lot of health problems before they strike.

Everyone has a favorite vaccination program, but remember that vaccines don't eliminate infections; they help the body's immune system to deal with them. It is probably not as important which vaccine products you use as it is how well the calves are able to respond. Several things can decrease the animal's ability to respond to the vaccines you invest in. Animals must be on a good nutritional program. Protein and trace minerals are especially important. When buying calves, the light calves may look good from a pay weight standpoint, but if they are not immunologically competent you may be buying trouble. Young calves may not have their immune system developed enough to respond well to vaccines. These calves may need to be revaccinated again later to get good protection. Cattle coming off of a long haul will need to rest and recover from the stress before they are processed. Provide good feed and water to allow them to replace the shrink and dehydration. A good rule of thumb is to allow them to rest one hour for each hour they were on the road from the time they left their previous home until they are in your care.

Once you get the calves home and into your starting lots, remember that a thermometer is the best friend you can have. Calves that are developing respiratory disease will show elevated temperatures 24 to 48 hours before they show obvious outward signs. Since early detection and treatment is the biggest factor in quick recoveries and decreased numbers of chronics, this time difference can be crucial. Pull and temp calves as soon as you suspect a decrease in appetite or activity. Remember to "if in doubt, check it out". If you are pulling a few calves that prove to have normal temperatures, you are probably getting all or most of the ones that should be treated. If you don't pull a few

normal ones, you are probably missing some problem calves.

Consider buying calves that are weaned or preconditioned. Calves that are right off the cow can't respond well to vaccines because of the stress of weaning. Always remember that anything that causes stress depresses the immune response. In addition, calves that are not accustomed to eating supplemental feed will not be able to maintain a good nutritional status during the conditioning period. Many calves don't know how to eat anything but grass if they are weaned straight off the cow on the way to the livestock auction. It typically takes at least 10 to 14 days for the calf to develop protection from the vaccines you give. If he is exposed to pathogens at the sale barn, he may have serious health problems before this protection can develop. Calves that have been given vaccines before

they are weaned, shipped and exposed should have a degree of protection in place when they need it. Preconditioned calves can look higher priced when you are buying, but a lot cheaper after you have had a big drug bill or heavy death loss. Oklahoma Quality Beef Network (OQBN) has several sales each fall at Ardmore and El Reno where preconditioned calves may be purchased. For more information on the OQBN preconditioned stocker cattle sales, contact you're the Blaine County OSU Extension office at 580-623-5195.

Today we have several good antibiotics and anti-inflammatory drugs that are very effective in treating respiratory disease, but what they all have in common is that they are expensive; and, they all work best in calves that have a competent immune system and proper nutritional management. In this case, an ounce of prevention is truly worth a pound of cure. **Oklahoma Cooperative Extension Service will host the Southwest Stocker Cattle Conference in Lawton on September the 29, 2009. For more information on the time and location of the meeting call (580) 252-0546 or the Blaine County Extension Office.**

