



Developing a Herd Health Program

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Lesson 5

Introduction

Herd health is and will always be an important topic for livestock producers. With constant mutations of pathogens and the introduction to new vaccines, wormers, and antibiotics, there is always new information available for livestock producers to access and learn. There continues to be new ways to modify or enhance your current herd health plan. However, one piece of information that is not imprinted in every producers head is when to give vaccinations or de-worm, or when is the best time of year to vaccinate or de-worm. Keep in mind, it is not easy to remember what vaccinations to give, when to worm, and what supplemental vitamins to give, much less when to give them. This herd health question is often most asked among livestock producers across the U.S. Understanding the proper vaccines and wormers to administer is half of the battle to developing an effective herd health plan. The other half is knowing when to give them. This lesson will talk about developing a herd health plan to reduce the incidence of sickness and diseases in your herd, as well as developing a herd health program that includes all management plans and procedures to be used to produce healthy cattle.

Disease Impacts on Production

Due to the U.S. transportation system that is in place and the lack of vertical integration in the beef cattle industry, livestock movement is increasing. This constant movement increases stress loads on cattle and provides more opportunities for diseases to spread. Diseases have a major impact on reproduction, growth, and performance. Negative impacts on any of these traits will affect the profitability of any cow/calf beef operations. When diseases occur and treatment is required, sometimes effectiveness of the treatment may be poor and production losses have often already occurred. Depending on the disease or condition, other animals could become affected or infected before you have time to prevent it. Some diseases exist at “subclinical levels,” where observable signs are not present, so losses continue undetected.

Not only will treatment of cattle have an effect on herd health cost, there are negative impacts on feedlot performance and carcass quality in calves that have been previously treated for sickness. Roeber et al. (2001) documented that cattle treated two or more times had 12% lower average daily gains, lower hot carcass weights and dressing percentages. With the high cost of fuel, feed, and fertilizer, one can't afford to compromise their herd health plan.

Benefits of Pre-Planning

The most economical way to keep disease and production losses low is prevention rather than treatment. Keep in mind there are several steps to implementing a complete herd health plan, other than vaccinations. These steps not only reduce the risk of disease in cattle on the ranch, but also cattle coming into the ranch. These steps include:

Prevent Exposure to Disease. Health status of purchased animals are often times unknown, thus quarantine procedures should be employed to decrease the likelihood of disease introduction into the herd. In operations that manage animals in confinement where increased exposure to disease-causing organisms can occur, a more intensive prevention programs should be employed.

Prevent Environment from Becoming Disease Host. Moist, damp areas can become host environments for disease-causing organisms. The risk becomes greater in these moist, damp areas where high cattle concentrations occur. These include calving areas, fall and spring time on winter feeding areas, watering areas, low-lying shady areas. Frequent rotation of these areas can reduce the incidence of these organisms from developing.

Keep Disease Resistance High. Nutrition, vaccination, management, and housing programs should be properly managed to keep disease resistance high at all times. All of these programs, if managed properly will minimize stress which is critical for building good immunity.

Observe, Observe, Observe. Never assume your cattle will take care of themselves and that sick cattle will get over it, as some of us that think were tough and don't go to the doctor when feeling bad. Constantly keep an eye on your livestock so that you can pick up on those sick animals immediately. This will increase your chances of preventing the spread of a bad organism.

If Disease Occurs, Prevent its Spread. When animals are sick, segregate, diagnose, and treat accordingly.

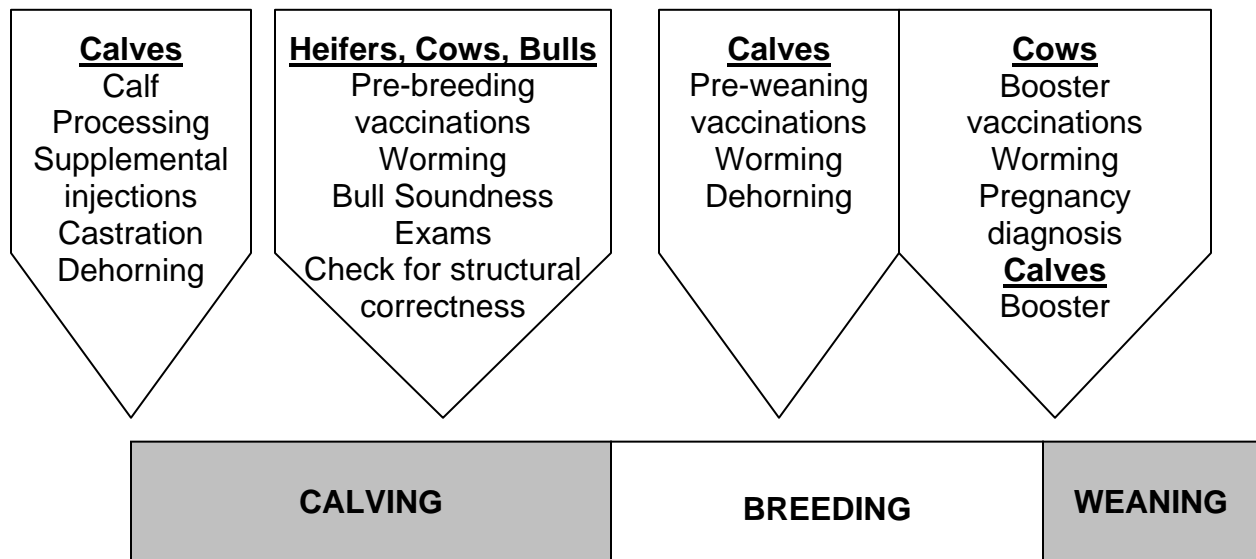
A lot of times we get caught up in the health of our own cattle and don't realize that when we sell cattle, there is a risk of health problems on the other end of the cattle trade. If you have a herd health plan in place, then the incidence of sickness in the cattle you sold will be low for that buyer. However, if you don't then there will likely be health problems that the buyer will deal with after he purchases and transports your cattle home. The person buying your animals should have the same preventative herd health plan in place in order to reduce the incidence of sickness in his herd.

If you currently do not have a herd health plan in place, consult with your local veterinarian and get one implemented. Herd health plans provide a routine, planned procedure for minimizing or preventing diseases. When scheduling your herd health

plan, you have to look at it in terms of an animal's production cycle, because there are certain stages of the production cycle when an animal becomes more vulnerable to diseases. Figure 1 illustrates the timing of a herd health plan for replacement heifers, cows, calves, and bulls based on a herds production cycle. This figure is based on a producer calving in March, breeding in June, and weaning in October. Keep in mind, if calving season is earlier or later, then the seasons will change and the schedule will likely change.

There is no single plan that works for every producer/herd. Some ranches, due to their operations, may require different vaccinations and wormers than others. Others may only need to vaccinate for diseases of higher risk in their areas. Production cycles are different for each operation, so timing of vaccinations, worming, etc. will be different. This is where consultation with your local veterinarian can assist you in putting together the right herd health plan for you.

Figure 1. Herd health plan schedule for replacement heifers, cows, calves and bulls during one complete production cycle.



The following is a basic herd health plan for replacement heifers, cows, calves and bulls at different stages of production.

The following is a Herd-Health Plan for Adult Animals:

1. Pre-breeding – vaccinate 30 days before the breeding season begins
 - a. **Replacement heifers**
 - Reproductive vaccines
 1. Leptospirosis
 2. Vibriosis if needed

- 3. IBR, BVDV, BRSV, PI3 virus vaccine (if a modified live vaccine is used, be sure animal is open, otherwise abortion may occur)
- Vaccinate for 7- or 8-way Clostridium (Blackleg)
- Internal parasite control
- External parasite control (lice and grub control in fall, fly control in summer)

b. Cows

- Reproductive vaccines
 1. Leptospirosis
 2. Vibriosis if needed
 3. IBR, BVDV, BRSV, PI3 virus vaccines (if a modified live vaccine is used, be sure the animal is open, otherwise abortion may occur)
- Internal parasite control
- External parasite control (lice and grub control in fall, fly control in summer)
- Check for soundness (eyes, teeth, feet and legs, udders)

c. Bulls

- Breeding Soundness Examination
- Reproductive vaccines
 1. Leptospirosis
 2. Vibriosis and/or Trichomoniasis if needed
 3. 7- or 8-way Clostridium (Blackleg)
 4. IBR, BVDV, BRSV, PI3 virus vaccines
- Internal parasite control
- External parasite control (lice and grub control in fall, fly control in summer)
- Check for soundness (eyes, teeth, feet and legs, udders)

2. Pre-weaning

a. Cows

- Pregnancy diagnosis
- Leptospirosis booster vaccine
- Check for soundness (eyes, teeth, feet and legs, udders)
- Internal parasite control – if detect presence of protozoans (flukes, roundworms, tapeworms, coccidians, and neospora)
- External parasite control (lice and grub control in fall, fly control in summer)

The following is a Herd Health Plan for Calves:

1. Newborn calf: 24 hours of age
 - Identify and weigh, collect data
 - Disinfect navel – 7% tincture of iodine
 - Vitamin A & D injection
 - Vitamin E/Selenium injection, if needed
 - Implant growth promotant (implant heifer calves only if they will not be used as replacements)
 - Castrate bull calves if terminal
 - Dehorn if needed

2. Mid-nursing period (2-6 months of age)
 - Vaccinate for respiratory diseases (IBR, BVDV, BRSV, PI3 virus, and consider pasteurized, especially if killed products are used; booster dose given at pre-weaning)
 - Vaccinate for 7-way clostridial (calves should receive an initial dose and a booster. Ideally these are given at 3 months of age and again 2-4 weeks later)
 - Vaccinate for *Haemophilus somnus*, *Pasteurella*, and *Mannheimia*
 - Deworm for internal and external parasites: timing is important. Should be given in early to mid-July for spring-born calves, at beginning of grazing for fall-born calves
 - Dehorn if needed

3. Pre-weaning – These procedures should be done 3-4 weeks prior to weaning to allow time for immunity to develop before the high-risk event of weaning.
 - Vaccinate for respiratory diseases (IBR, BVDV, BRSV, PI3 virus, and consider pasteurized, especially if killed products are used; booster dose given at pre-weaning)
 - Vaccinate for 7-way clostridial
 - Vaccinate for *Haemophilus somnus*, *Pasteurella*, and *Mannheimia*
 - External parasite control
 - Internal parasite control
 - Implant growth promotant
 - Dehorn if needed

As you can see, disease prevention is not simple. Developing a herd health plan will not only reduce treatment and production cost in your herd, but it will make it easier to implement and manage a health cattle operation.

Develop a Herd Health Calendar

One tool that you should consider that can assist livestock producers in planning is developing a herd health calendar. A herd health calendar will allow you to visualize your strategies for developing, implementing, and evaluating a herd health program

utilizing a calendar format. A herd health program is different from a herd health plan in that a program includes several plans, including the herd health plan. It also includes calving, breeding, nutrition, and general management plans.

Now before I get any further, one can design a herd health calendar just by making notes on a sheet of paper, just as long as one has a plan of action for implementing this herd health plan. But for convenience, developing a calendar that reminds you when you need to work (process) your animals and what to do at that working will make your life easier. Utilizing a calendar format, you can also plan other cattle workings the same time as your herd health plan (vaccinating, worming, etc.). Developing a herd health calendar has many benefits that include:

- Visualization of the number of times you will work your animals
- Less stress on the producer, employees, and family by having events planned out
- Prevents inaccuracies of program implementation and product purchasing
- Reduces health problems in the herd, thus increasing net profit

Developing a herd health calendar can efficiently assist you in knowing when to work your cattle, and what to give them. Keep in mind, one should not develop a herd health calendar based on calendar dates or calendar season, rather develop a herd health calendar based on time of the production cycle: when calving season starts, when the breeding season starts, and when you plan to wean your calves. This allows you to easily change your herd health program if your calving season changes from year to year.

Obviously, doing anything to cows and calves requires handling, so the idea is to plan your herd health program around other animal working or processing days to minimize the number of times those animals are handled. We will use the magic number two as that should be, on average, how many times both cows and calves should be handled in a year's time.

You can find different forms of planning a calendar in the list of supplemental readings at the very end of this lesson. However, the University of Minnesota Extension Beef Team has developed a Cow/Calf Management Calendar that offers timely information and suggestions on managing your herd utilizing five different management categories: calving, breeding, management, nutrition, and health. This planner is offered in two formats on the U of M Beef Team website: an [Interactive Cow/Calf Planner Excel Worksheet](#) (Appendix 1) that provides you topics under each category relevant to the time of year and gives you pertinent information for each topic by touching the cell for that topic where a window will appear. The [Cow/Calf Planner Print Sheet](#) (examples on Appendix 2) allows you to print each calendar month with all the pertinent information for each topic. Both formats contain the exact same information.

In this Cow/Calf Management Calendar, it keeps you reminded of the events that need to be considered or implemented based on the production cycle. This calendar is set up on a calendar year, but the information on this calendar is based on a spring calving

herd with the mature cow herd calving the first of March, with breeding season starting the first of June, and weaning the first of October. Again, if you have a fall calving season or your spring calving season is earlier or later than March, you can change the months on the calendar by moving them up or down to fit your program.

Summary

Before calving season, consider using some of these ideas to plan your herd health program. If you don't have a herd health program, consult with your local veterinarian to develop a herd health program and calendar. Also, build a strong, trusting relationship with your local veterinarian to ensure that your job and his job become much easier. If you do not have a local veterinarian, contact your state extension livestock specialists and have them assist you in finding a veterinarian that can help. I hope you learn from this lesson, and all other lessons, the importance of herd health and developing a herd health program. In the long run, it will either save you money, or prevent any future unexpected expenses.

Appendix 1. Cover page of the Cow/Calf Planner describing contents of the calendar. The following four pages are management considerations planned in a calendar year for a producer that calves in March, breeds in June, and

The Cow/Calf Planner

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The Cow/Calf Planner is a Cow/Calf Management Calendar that offers timely information and suggestions on managing your herd utilizing five different management categories.

CALVING - Calving is a critical time of year that requires equipment, supplies, labor and facility preparations. This calendar prepares you for the calving season and offers suggestions to manage your calf crop.

BREEDING - Reproduction is one of the most important economical traits in the beef industry. Breeding season success is a reflection of your herd management practices of the previous year. This calendar helps you prepare and manage for the breeding season and offers tips on breeding season success.

MANAGEMENT - Management plays a large role in all aspects of an operation and greatly impacts economics. This calendar provides strategies for managing areas of an operation that can easily be over-looked and have major impacts on your economic returns and production goals.

NUTRITION - Nutrition impacts reproduction, lactation and performance in a herd. Nutrition is an area of management that should be monitored year round. This calendar includes suggestions to ensure that your cows, replacement heifers, bulls and calves are conditioned to exceed your management expectations.

HEALTH - Health, along with nutrition, can have a major impact on reproduction, lactation and performance in a herd and greatly affect carcass quality. This calendar provides a monthly schedule for vaccinating your herd and suggestions for monitoring herd health.



This program offers two work-sheets: Cow/Calf Planner Worksheet provides you topics under each category relevant to the time of year and gives you pertinent information for each topic by touching the cell for that topic where a window will appear. The Cow/Calf Planner Print Sheet allows you to print each calendar month with all the pertinent information for each topic.

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	<u>CALVING</u>	<u>BREEDING</u>	<u>MANAGEMENT</u>	<u>NUTRITION</u>	<u>HEALTH</u>
January				Monitor winter feeding	
				Pre-calving body conditioning of cattle	
	Begin calving area preparation			Herd bull conditioning	Consultation with local veterinarian
	Begin lining up calving season help		Facility maintenance	Monitor replacement heifer performance	Replenish calving supply equipment
February	Schedule calving help				
	Calving area preparation				
	Sort & monitor heifers close to calving			Monitor your replacement heifers	Navel dip newborns & aid nursing if necessary
	Record individual calving data	Bull breeding soundness exams	Record-keeping and production data mgmt	Monitor herd bull body conditions	Herd bull vaccinations
March	Sort springing heifers to calving area	Estimate number of bulls needed for breeding season			
	Begin monitoring cows close to calving	Bull breeding soundness exams			Navel dip newborns & aid nursing if necessary
	Rotate calvers	Replace infertile bulls		Grazing first-calf heifers	Monitor newborn calves for sickness
	Continue recording individual calving data	Plan for the breeding season		Re-manage poor conditioned cows & heifers	Monitor cows for retained placentas

Calving

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	<u>CALVING</u>	<u>BREEDING</u>	<u>MANAGEMENT</u>	<u>NUTRITION</u>	<u>HEALTH</u>
April					
		Female tract scoring and pelvic measurements		Monitor conditions of cows and first-calf heifers	
		Monitor your heifer and cow cyclicity status	Second culling on replacement heifers	Herd bull nutrition	
	Wrap up the calving season	Breeding season preparations	Schedule breeding help	Summer grazing strategies	Monitor health of calves
May					
			Plan help for summer cow/calf working		
	Wrap up the calving season	Begin breeding of your replacement heifers	Monitor bull breeding in heifer pasture		Inventory cow/calf working supplies
	Check status of remaining cows left to calve	Natural service vs AI & estrous synchronization	Monitor for bull injuries		Summer Cow/Calf working
June					
		Optional breeding on pregnant cows			
		Begin the regular breeding season	Monitor performance of breeding bulls w/ cows	Evaluate your breeding pastures	
	Re-evaluate management of leftover pregnant cows	Turning bulls out after AI	Monitor for bull injuries	Begin to plan help for the hay season	Summer cow/calf working

Breeding

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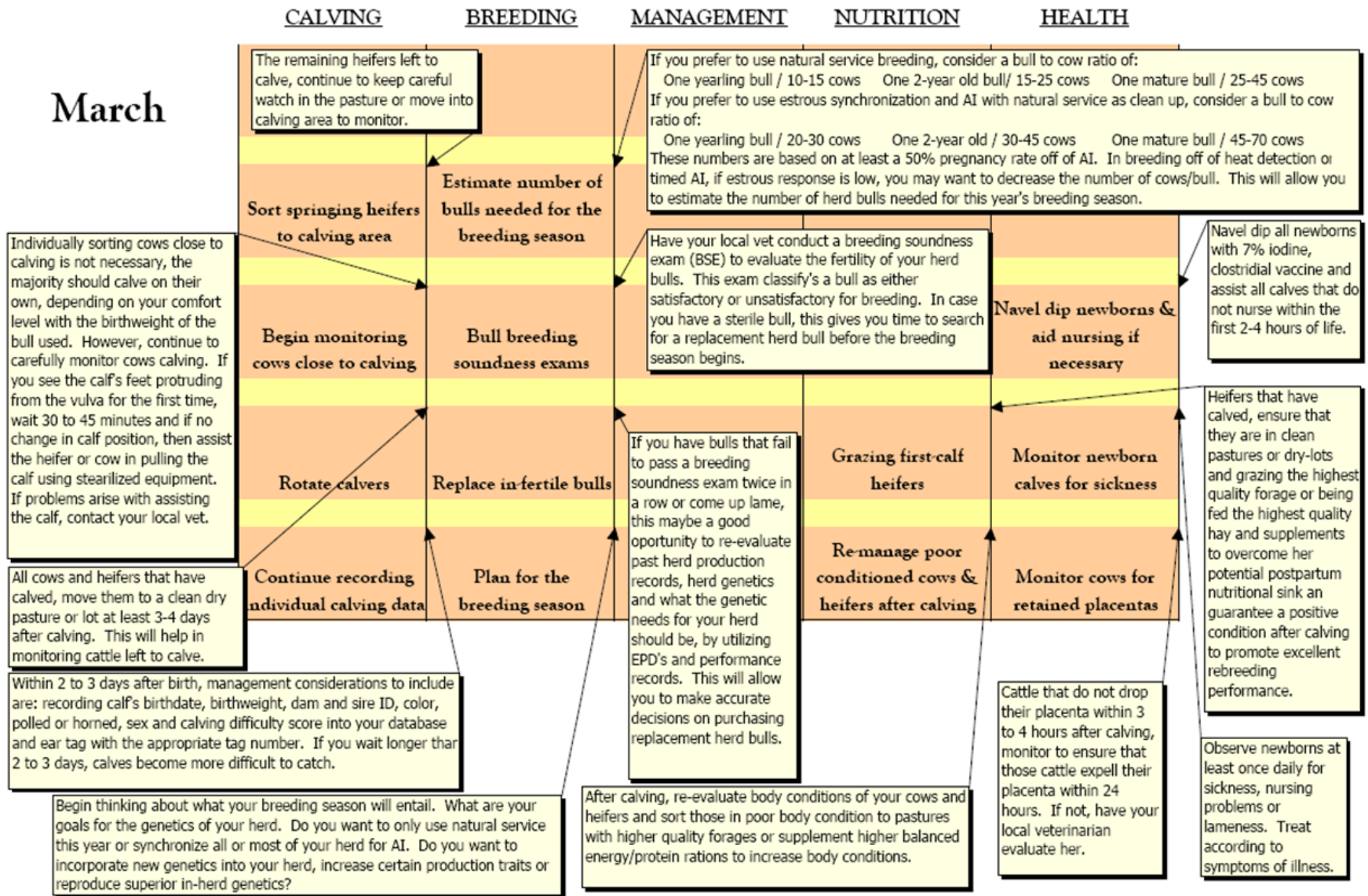
	<u>CALVING</u>	<u>BREEDING</u>	<u>MANAGEMENT</u>	<u>NUTRITION</u>	<u>HEALTH</u>
July				Work closely with the weather man	
				Monitor grazing pasture resources	
		Optional AI pregnancy determination		Monitor calf nutrition and body condition	
		Remove bulls from heifer breeding pasture		Monitor cow body condition	Summer cow/calf working
August					
		Plan for fall pregnancy determination			
		Remove bulls from the main breeding pasture	Begin calf weaning schedule		Summer cow/calf working
September					
		Bulls should be pulled from the breeding pastures		Body condition cows and first-calf heifers	
		Fall pregnancy determination	Weaning time	Pre-weaning creep feeding	

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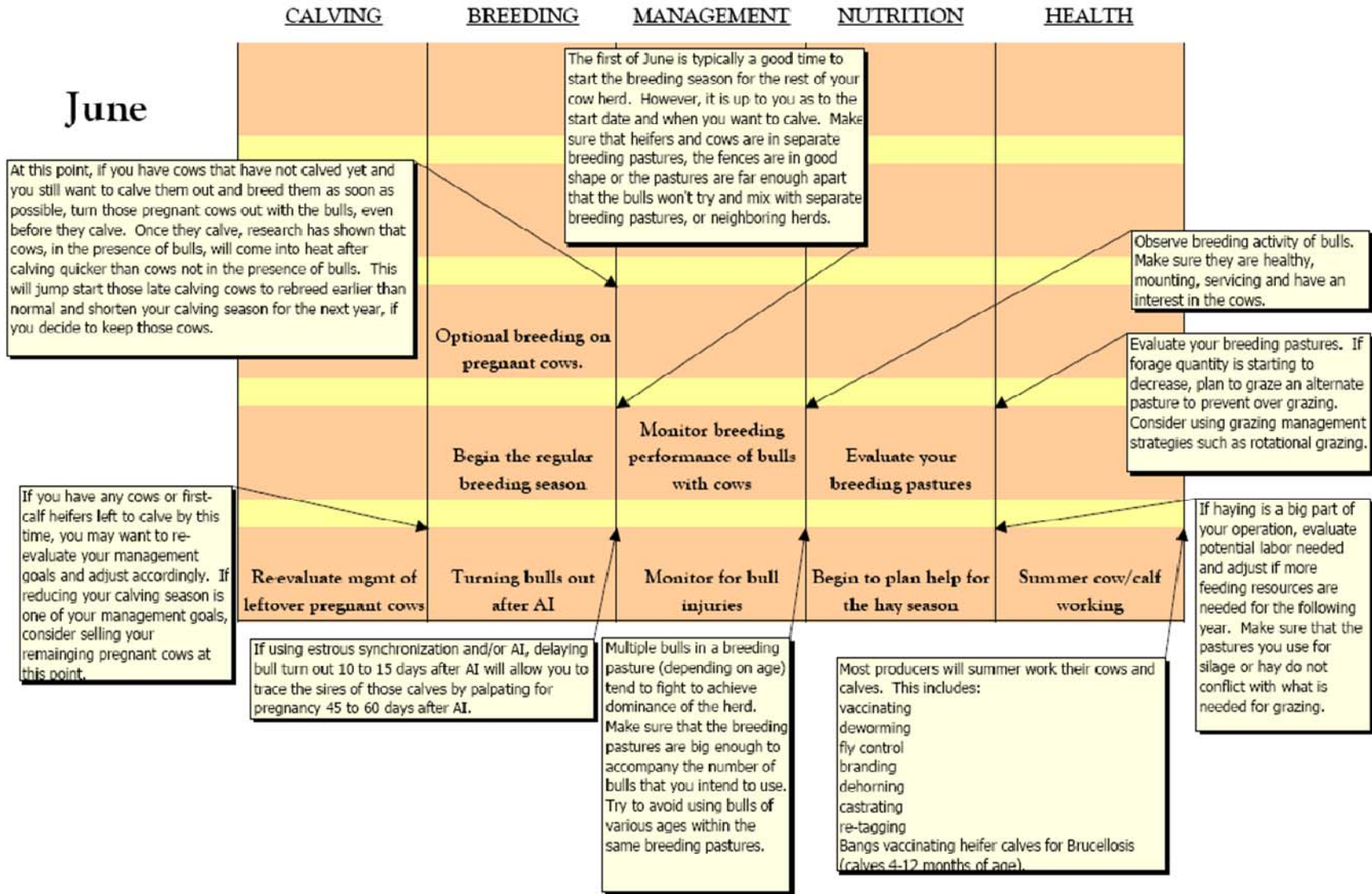
	<u>CALVING</u>	<u>BREEDING</u>	<u>MANAGEMENT</u>	<u>NUTRITION</u>	<u>HEALTH</u>
October			Weaning time		
			Manage your heifer calves		
			Selection criteria/heifers	Pre-weaning creep feeding	
			Manage your late bred and open cows	Body condition cows and first-calf heifers	
		Fall pregnancy determination	Manage cull cows	Plan your replacement heifer winter feeding	
November					
			Prepare for winter feeding needs		
			Manage cull cows		
			Re-locate cows for winter		
			Compare calf markets and market your calves		
December					
				Monitor replacement heifer performance	
			Vacation time and repair time	Monitor herd bull conditioning	

Weaning

Appendix 2. Example pages of three months (March, June, and October) of the Cow/Calf Planner describing in detail recommendations under each management topic, for that month.

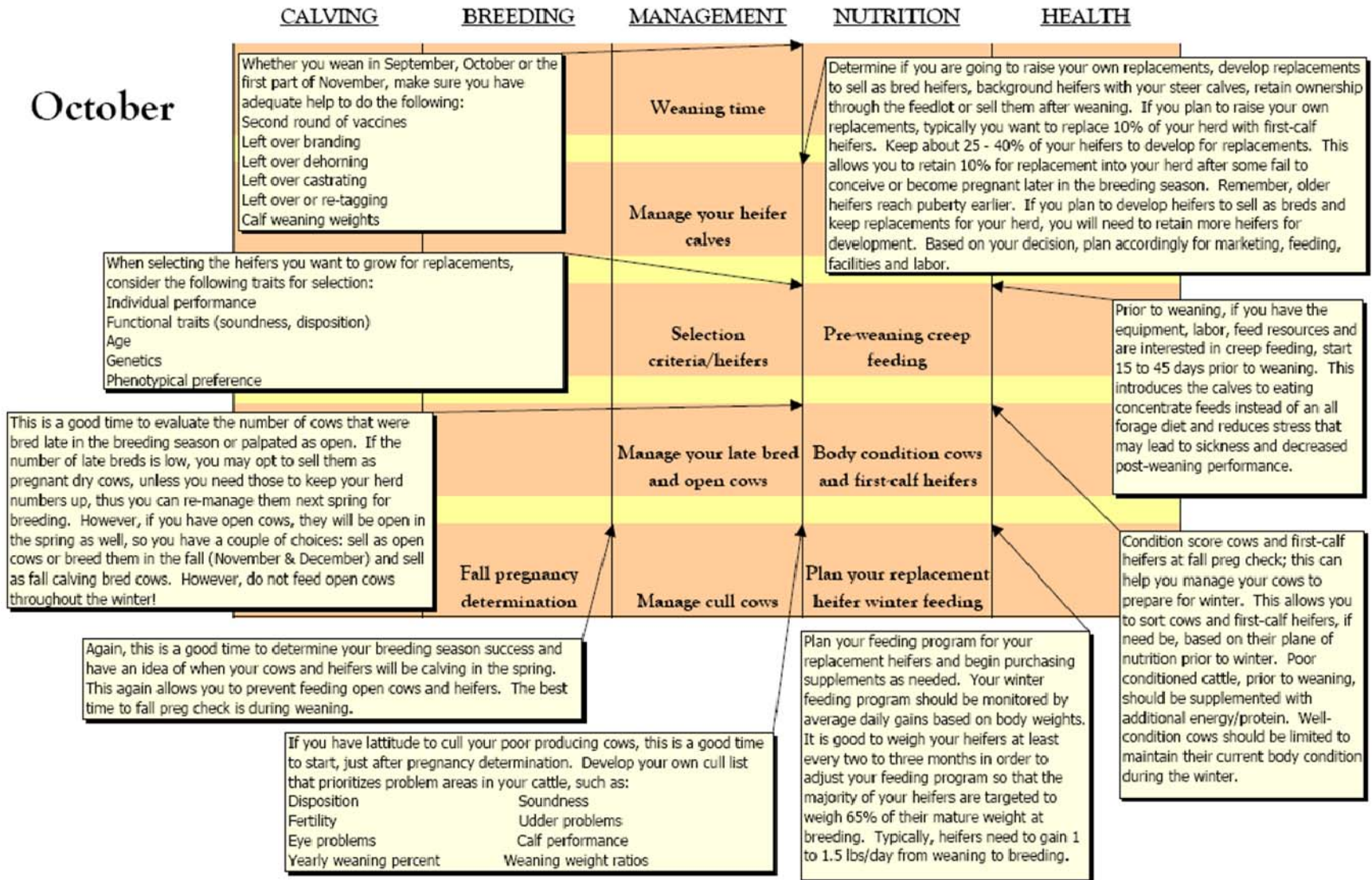


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October



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Notes

Lesson 5 Quiz

Developing a Herd Health Program

1. If calves destined for the feedlot have been treated two or more times since birth, what are two negative impacts on feedlot performance or carcass quality that can occur?

2. **True or False.** The most economical way to keep disease and production losses low is treatment of diseases.

3. There are five steps to reduce the risk of disease in cattle. One of these steps includes preventing the environment from becoming a disease host. What are two areas that are potential hosts for diseases and how can you reduce the incidence of creating that environment for these organisms to grow?

4. List the four reproductive diseases for replacement heifers, cows, and bulls and the four respiratory diseases for calves that should be vaccinated for.

5. **True or False.** It is OK to give a modified live vaccine to a pregnant cow or heifer.

6. When should you de-worm for internal and external parasites in calves?

7. List four benefits to developing a herd health calendar.

8. **True or False.** One should develop a herd health calendar based on the production cycle of your animals.

9. On average, how many times should replacement heifers, cows, calves, and bulls be handled in a production year, not include the use of estrous synchronization or artificial insemination?

10. List the five plans that should be included in a herd health program and part of a herd health calendar.

PLEASE SEND QUIZ TO YOUR ASSIGNED GRADER UPON COMPLETION

Name _____ Phone _____

Address _____

Fax (Optional) _____ Email (Optional) _____

2008 Minnesota Beef Home Study Course

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