



Grazing Contracts for Livestock

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Grazing livestock for other farmers or ranchers is a good way to make an income from rented or leased land without the expense of livestock ownership. It requires knowledge of livestock, but more importantly, knowledge of how to make money from grass. This publication discusses some of the issues involved with contract grazing, including pasture and grazing, the various classes of livestock, equipment, a sample contract, some of the economics to consider, and other resources available on the subject.

Contents

Introduction.....	1
Pastures and Grazing.....	4
Classes of Livestock to Graze.....	5
Equipment.....	8
Leasing Pasture.....	10
Grazing Contracts.....	11
Economic Projections and Budgets.....	12
Recordkeeping.....	13
Conclusion.....	13
References.....	13
Further Resources.....	14
Appendix 1: Responsibilities to Be Defined in a Contract Heifer-Raising Agreement.....	18
Appendix 2: Sample Contract-Grazing Agreement.....	19



Photo: Courtesy of USDA NRCS

Introduction

The dream of working the land, managing livestock, and having a rural lifestyle fills the minds of many young people who want to get into farming, as well as those who want to make a career change and are looking to agriculture for that next stage in their life. In addition, many experienced livestock producers are looking for interesting ways to add an enterprise, or to scale their operation up or down. The question is, what are the opportunities to engage in an animal enterprise that doesn't require land ownership and that offers year-to-year flexibility? The answer may be contract grazing.

Custom grazing livestock on contract is a business enterprise in which you become a land, grass, and livestock manager, not an owner. Many dairy farmers and beef producers cannot sustainably raise young livestock on their own farms due to feed costs or land limitations. As a custom, contracted grazer, you will be "filling an important niche as a forage chain, animal-raising, relationship specialist whether it's seasonal, year-round, full or part-time" (Bishopp, 2015).

Whatever the goal, you must always evaluate any potential opportunity thoroughly and make sure that the desired outcome is sustainable and realistic.

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Related ATTRA Publications

www.attra.ncat.org

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Dairy Production on Pasture: An Introduction to Grass-Based and Seasonal Dairying

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Evaluating a Farming Enterprise

Grazing Networks for Livestock Producers

Integrating Livestock and Crops: Improving Soil, Solving Problems, Increasing Income

Irrigated Pastures: Setting Up an Intensive Grazing System that Works

Managed Grazing in Riparian Areas

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Pasture, Rangeland, and Grazing Management

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Rotational Grazing

Ruminant Nutrition for Graziers

Solar-Powered Livestock Watering Systems

Why Intensive Grazing on Irrigated Pastures?

See also: ATTRA's Managed Grazing Tutorial

To Own or to Contract...

"Contract grazing is more likely to generate positive returns than owning stockers, which in turn generates better returns than cow-calf operations. This is because there is less variation in profitability from year to year. Contract grazing has the most stable profits over time, while cow-calf operations have wide swings from year to year" (Teegerstrom et al., 1997).

This publication describes how to minimize the capital investment required to generate an economic return from owned or rented land by grazing cattle on contract. For some landowners, a return large enough to pay the property taxes is sufficient, offering a cattle grazier the opportunity to rent very affordable pasture during the growing season.

Could you possibly contract graze rented or leased pasture to generate a return with very little or no capital investment? In his book *No Risk Ranching: Custom Grazing on Leased Land*, Greg Judy describes his method of utilizing rented, leased, or bartered land to make money raising cattle on contract. See the Further Resources section for information on ordering this book.

Contract grazing is not a casual enterprise. It requires a thorough knowledge of both pasture and animal management. For instance, intensive grazing of an extra parcel of land may not always result in the weight gains expected on stocker cattle or dairy heifers, for many reasons. Meanwhile, continuous grazing often results in problems with persistence of valued forage species and erosion in environmentally sensitive areas. Contract grazing requires knowledge of pasture dynamics and some grazing management skills on the grazier's part to get the results that livestock owners (your customers) will expect. Typically, the custom grazier is expected to achieve what the livestock owner can't accomplish at home due to resource or management limitations. Anyone considering contract grazing should have several years of grazing experience and good stockmanship skills prior to engaging in any legally binding arrangement.

If you are interested in contracting your grazing services with a livestock owner, the most difficult part of the process may be convincing the livestock owner that you can properly manage both the land and the animals, especially if you have no experience in contract grazing. The first few years may be the most difficult, until you have demonstrated some success. One suggestion is to start small and ensure success with fewer animals and more acres than you think you need. It is better to get a smaller return with limited grazing than to overgraze and have to purchase additional feed. Building a history of the land's actual production capabilities, along with some personal experience, will allow you to fine-tune the system as you gain the knowledge necessary for successful grazing.

Role of the Contract Grazier

As a custom grazier, you will be filling an important niche as a grazing contractor. With this in mind, you can think of yourself as a niche-marketer. Identify your niche: what you have to offer that is above and beyond the norm. Think of what you can offer, such as taking on risk that the livestock owner inherently has but can outsource to you. Your price will justify the unique services you can offer to address the risks livestock owners wish to outsource. Think of yourself as a livestock risk-management specialist.

Livestock owners have management constraints (like time and land availability) that can be taken on by you as the grazier (Anderson et al., 2003). Marketing this to your customers, and backing it up with excellent management, can result in making a name for yourself as a conscientious grazier who delivers the goods... whether those goods are weight gain, animal health, percent heifers bred, etc. Also, providing AI services for heifers on contract is an excellent way to add value. If your cost of production is near the breakeven price for grazing, then differentiation through adding more value can justify a higher price.

Sourcing Your Customers

Getting customers is one of the many uncertainties that come with agriculture. There's no easy way to do it; it just takes persistence and a bit of creative thinking. In 2007, a Midwest consortium of university and non-profit professionals conducted a contract grazing survey that provided some insight into customer acquisition and tenure. Table 1 suggests that obtaining clients by word of mouth is strong in this sector.

Table 1: Custom Grazing Survey 2007: Demographics & Management Practices

Type of Operation	Customer Tenure		Method of Obtaining Clients	
	One to two years	Three or more years	Word of mouth	Referrals from ag professionals*
Stocker operations	12%	88%	100%	0
Cow-calf, summer grazing operations	50%	50%	n/a	n/a
Cow-calf, year round operations	22%	78%	n/a	n/a
Cow-calf, combined	n/a	n/a	76%	25%

* In addition to word of mouth

Source: ISU, 2007

Given that word of mouth has been the best (if only) way to secure customers, it's incumbent on you as the grazer to do some marketing of your own, based on careful thought about your message and what you can offer that's different. Consider listing with breed associations, conservation districts, your local Extension service newsletter, or local and regional sale barns. Also, a grazing land-management or conservation district workshop or conference may be a helpful way to meet prospective customers. Make a simple poster or flyer that will make cattle owners curious about your operation.

Networking with farm and ranch realtors is another means of finding land owners who want their land grazed, if you should end up with more livestock than your place can handle. This can also sometimes act in reverse too. A ranch realtor may know of a livestock owner wishing to contract out the grazing of his or her animals. And don't forget to advertise in a regional agriculture newspaper, as this is often the best way to periodically get the word out that you're in business.

Custom (contract) grazing is an arrangement in which you get paid to raise someone else's livestock, on land that you own or lease. You are selling your livestock management services."

—Grzeskiewicz, 2015b

Ideas for Developing a Contract-Grazing Business

Source: Meg Grzeskiewicz, who operates Rhinestone Cattle Co., a mob-grazed, grass-fed beef enterprise in Colden, New York

Leasing land should be your first consideration in looking for land if you are young, new to agriculture, planning to expand an enterprise you already run, have limited financial resources, or for any reason are reluctant to buy land.

With leases, you don't need to come up with a down payment, and the lease payments can be negotiated with your landowner.

A lease has no interest or property taxes. You can obtain land and get started in grazing without going into six figures of debt. This leaves your money free for purchases that will bring a faster return on your investment, such as buying animals.

The opportunity to renew or discontinue a lease every few years gives your business flexibility to grow and change. An informal one-page contract is usually all you need. If you're not sure you want to commit to farming or living in your current area forever, lease before you buy.

Local farm newspapers and bulletin boards around town often have "for lease" ads. You can place an ad of your own, seeking pasture to rent. Keep an eye out for potential leases as you're driving around. If small brush is beginning to grow up in a field or the fence is in bad shape, that land has probably sat idle for a few years. There are many elderly farmers, people with demanding jobs, and absentee landowners who aren't able to work their land but don't want to sell it. Plenty of people are looking for a lessee. When word gets around that you're in the market, it's very possible that someone will come to you!

(Grzeskiewicz, 2015a)

The following are key points to consider before entering into a contract-grazing arrangement:

- Forage and pasture resources: What is the quality of the forage base? What kind of grazing system will you use?
- Class of livestock: Will you graze stocker steers, heifers, or cow-calf pairs?
- Equipment and facilities: What is available and what will you need to purchase or barter?
- Contracts for grazing: What is the basis of your contract? Dollars per pound of gain? A flat fee?
- Economics of contracting: Use of budgets to plan and evaluate new enterprises

A *diverse forage base will help ensure that seasonal impacts on the pastures are minimal and that forage will be available during different times of the year.*

Pastures and Grazing

A continuous supply of high-quality pasture and stored forage is crucial to success in contract grazing. In many cases, in order to optimize the available resources, some type of managed grazing system will be needed to ensure that forage quality and quantity can be maintained throughout the growing season. Regional differences will dictate what forages are appropriate for the different seasons and environments. In many cases, local assistance with forage selection and pasture improvement is available from the Cooperative Extension System or the USDA Natural Resources Conservation Service (NRCS). ATTRA publications that offer many resources on managing pastures and grazing are available at www.attra.ncat.org/attra-pub/livestock/pasture.html.

In order to supply high-quality pasture, you should diversify your forage base, recognizing that different forage varieties fill a wide range of

environmental niches on the farm. A diverse forage base will help ensure that seasonal impacts on the pastures are minimal and that forage will be available during different times of the year. Some producers interseed annual grasses at the proper time of year to supply additional high-quality feed. In many cases, a few paddocks planted with annual grasses and legumes can make the difference between simply surviving periods of low perennial-forage production and maintaining weight gain at the desired rate.

Pastures should also be rested periodically to ensure a healthy stand and maintain forage quantity and quality. Most pasture forages do not persist or perform well under continuous grazing. In some situations, the rest period may be only a few weeks in an intensively grazed, multi-paddock system where animals are moved regularly. Other situations may involve resting pastures for a year or more, such as native rangeland where moisture is limited. Maintaining the appropriate forage cover will improve soil health, reduce weed pressure, lessen erosion, and improve drought resistance.

Rotational grazing systems allow for the rest pastures need to be productive. Although continuous grazing systems can have positive effects on animal weight gain due to grazing selectivity, they can cause problems if animal distribution cannot be controlled adequately. A Canadian study found that when grazing systems were evaluated for total efficiency and net returns, a six-day, high-stocking-rate system was the best of those studied (Phillip et al., 2001). The researchers evaluated beef cow-calf pairs grazed with nine treatments in a 3x3 factorial of rotational frequencies: two-day, six-day, or continuous, with three different stocking rates: 1.23, 1.77, and 2.22 acres for a cow-calf pair. While animal performance showed little benefit from intensive grazing (and usually doesn't), the efficiency of land use and total economic performance was significantly improved. On a 100-acre farm, even considering the additional labor and fencing, the six-day, high-stocking-rate grazing system returned \$10,000 more than a continuous system.

In another, more recent, study, University of Wisconsin-Madison researchers looked at the effects of forage yield and quality among several common management systems. They developed a randomized complete block field experiment with three separate replicated blocks of four treatments, including a rotational system (Management

NRCS and Cooperative Extension phone numbers can be obtained in the Federal and county government sections, respectively, of your local telephone directory. Also, you can access local NRCS and Extension directories on the following websites:

Natural Resources Conservation Service
<http://offices.sc.egov.usda.gov/locator/app?agency=nrsc>

Cooperative Extension System
<http://nifa.usda.gov/partners-and-extension-map?state=All&type=Extension>

Intensive Rotational Grazing, or MIRG), continuous grazing, a harvested forage system, and treatment of unmanaged grassland.

Twenty-five cow-calf pairs were grazed in the MIRG system for two days in a 1.5 acre paddock, then moved to the continuous grazing system for 30 days, then back to the MIRG paddock for another two days, for a total of six cycles through the grazing season. This study allowed for a 28-day rest period in the MIRG paddocks for each grazing cycle, and a two-day “rest” per cycle for the continuous grazing paddocks (when the cattle were in the MIRG paddock). A 6-inch residual was left in the MIRG paddocks after the two-day grazing period. The harvested forage fields were clipped twice during the grazing season based on plant height to a stubble height of two and a half inches, and the unmanaged fields were not grazed during the grazing season.

For both grazing seasons (2006 and 2007), the MIRG paddock yielded more forage than any of the other treatments in the experiment, and the unmanaged plot had the lowest forage yield of all. In 2006, the MIRG system provided around 9,000 pounds per acre of potential forage productivity and the continuous grazing plot yielded around 7,000 pounds per acre. For the 2007 grazing season, a wetter year, the MIRG system resulted in approximately 11,000 pounds per acre compared with roughly 6,500 pounds per acre in the continuous grazing plot. The MIRG system also performed well above the other treatments in the study for forage quality (Oates and Jackson, 2015).

The researchers concluded that higher production levels for rotational grazing likely resulted from the fact that this management strategy “periodically resets plant development and maintains a preferred plant community composition because livestock are grazing down all plants in a brief interval as compared to continuous grazing, when they selectively and repeatedly graze down preferred plants” (Oates and Jackson, 2015).

The key concept here is management. “The success of your grazing management should be predicated and evaluated on a desired outcome—that is, a result” (Budd and Thorpe, 2009). Those outcomes could be any of several goals, including increasing or sustaining livestock production, increasing water quality and soil health, maximizing plant diversity, improving wildlife habitat, conducting land restoration, or controlling invasive weeds. Often, the goal of the grazier is

a combination of many of these outcomes. “By viewing grazing as a tool to achieve a desired, clearly enunciated result, managed grazing can be used to achieve multiple purposes” (Budd and Thorpe, 2009).

Perhaps the most interesting finding of these studies was that the use of a managed, intensively grazed system can reduce the overall variability of net returns by increasing forage quality and quantity. In addition, the managed, intensively grazed systems showed a higher likelihood of generating a positive return when compared to the continuous grazing system.

For more detailed information on managing pastures and grazing, see the ATTRA publications *Pasture, Rangeland and Grazing Management* and *Irrigated Pastures: Setting Up an Intensive Grazing System that Works*. In addition, ATTRA’s Managed Grazing Tutorial discusses practical options for planning a grazing system in an online, interactive course designed to help producers improve soil health and pasture condition while maximizing income potential through grazing. Access the Managed Grazing Tutorial at no cost on the ATTRA website at www.attra.ncat.org/tutorials/grazing/index.php.

Classes of Livestock to Graze

Once you decide that you want to graze animals for someone else, this is one of the biggest questions: What types of animals are you interested in working with? There are many options, and the best choice depends on your facilities, your expertise, and how much work you want to take on.

The examples used in this publication focus on cattle, but sheep, goats, and even horses can be contract grazed if you have pasture that needs to be used and a livestock owner who needs pasture. In many cases, multispecies grazing to take advantage of diversity within your pastures may be possible, making improved parasite control and additional economic opportunities available. For more information on grazing multiple species, see the ATTRA publication *Multispecies Grazing*.

Stocker Cattle

Probably the easiest grazers in terms of workload are stocker cattle. Stocker cattle are young weaned calves, usually around 500 pounds, that gain weight on grass prior to finishing in a feedlot. A good grazier, with good-quality forages,

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Photo: Courtesy of University of Florida Extension

A good grazier, with good quality forages can expect stocker cattle to gain from 1.5 to 2.5 pounds per day.

can expect cattle to gain from 1.5 to 2.5 pounds per day. In many cases, a load of calves will be delivered for a set period of grazing, after which they are picked up and continue on to a feedlot. Grazing this class of cattle can be a challenge at times due to their inexperience with certain feed-stuffs and lack of previous exposure to humans. Every group has to be trained to respect fences and not all cattle have had contact with electric fences. To help reduce the training problems, some producers have found it useful to keep a few cull cows around to serve as trainer animals for the new calves. Many producers have found that small corrals close to the barn, with solid fences and several offset hot wires, work well in training cattle to electric fences without the risk of escape.

An important consideration for younger animals is the quality of their forage. If contracts for stocker cattle are based on the weight they gain during the grazing period, higher-quality forage should make for better weight gain. Improving pastures, seeding annuals, and grazing management are important for ensuring that the nutritional needs of young, growing animals are met.

Cover crops complement cattle grazing particularly well and provide excellent forage. Consider, in addition to clovers and cool-season annual grasses, vetch, brassicas, and warm season crops like forage peanuts or sorghum sudan. Cover crops have been noted for their soil-building qualities and are often used as a green manure for succeeding annual cash crops. Grazing cover

crops can be a way to increase forage quality while benefiting the soil. For more information, see the ATTRA publication *Integrating Livestock and Crops: Improving Soil, Solving Problems, Increasing Income*.

In some instances, depending on your location and situation, supplemental energy may also be needed to enhance conversion and utilization of high-quality pasture because in good pastures, adequate protein is rarely lacking. Especially in cool-season pastures, the energy-protein balance for efficient conversion is often tilted too far toward the protein side of the equation, and supplemental energy can often improve overall gains and profitability. Grazing cool-season grasses when they are a little mature, but before they become fibrous, can provide a forage that has a better energy-to-protein ratio, which is more efficiently utilized by the animal. Be sure to assess your pasture quality accurately so that you can supplement correctly if needed. The Pasture Condition Score Sheet (Cosgrove et al., 2001) is a good resource for assessing pasture quality.

As a grazier, you want to make sure that you receive healthy animals that have good growth potential and will make you money with fast weight gains. Work with the livestock owner to ensure that the animals are vaccinated, healthy, and have already been weaned and well backgrounded (ensuring the cattle are over the stress of weaning). This will reduce stress on the animals and make the first few weeks of adaptation much smoother. Be cautious about groups of calves recently purchased from sale barns. Since commingled calves may have been exposed to additional stress and pathogens, they may not perform as well as animals coming from a single source. Consult with your local veterinarian for proper health procedures and vaccinations that will make your job easier and result in healthier, faster-gaining animals.

Beef Heifers

Beef heifers can require more management, facilities, and labor than steers. The key difference is that the heifers will likely be bred while in your possession and would be expected to calve at approximately 24 months of age. Therefore, the heifers may be grazed for a longer period; perhaps left with the grazier from weaning until close to calving time 16 months later. Managing heifers can be labor-intensive when synchronizing

the mating of sizeable groups of females. This may require more facilities and equipment, and probably some training, since the human factor in these types of heifer-development operations is critical for success.

Well-managed heifer-development operations allow heifers to receive the attention they need to be bred within a short time, so that calving can be more easily handled by the owner. For the additional work, there is additional return, but the expectations are also higher. In many instances, it is expected that a high percentage of the heifers will be bred to specially selected bulls via artificial insemination. If this is the case, additional arrangements need to be made for semen, supplies, and breeding expertise. If bulls are going to be used for breeding, it is necessary to have enough of them to ensure that all heifers are bred within an acceptable time. Young bulls can be expected to cover only 20 to 25 females, whereas a mature bull, two to three years old, can cover up to 40 females if he is in excellent physical shape. If bulls are going to be used, be sure to get their fertility tested before each breeding season. Just because a bull settled cows last year doesn't mean he is still able to settle cows this year. Many cattle owners have suffered major setbacks due to the incorrect assumption that a bull was still functioning properly.

Any feeding program—either supplementation during grazing or full feed during the non-grazing period—will need to be closely monitored to ensure adequate growth of the heifers. Heifers should be on a high plane of nutrition, but allowing heifers to get too fat can cause problems during calving. Contract graziers may want to consider establishing a set fee for each animal that is grazed under this system, with incentives for making breeding targets and weights during development. Developing and calving out heifers should not be the first contracting choice for people with limited cattle experience.

Dairy Heifers

Much of the information about beef heifers also applies here. With dairy heifers, the cliché that heifers are the most overlooked enterprise on the farm is too often true (Cady and Smith, 1996). Therefore, the opportunity to contract-graze dairy heifers is sizeable and getting larger all the time. Replacement rates on most dairies are 25 to 30%; therefore, on most dairies many heifers are needed



Photo: NCAT

to fill the vacancies along the way. Another consideration is the cost of replacement animals, which accounts for 15 to 20% of the total cost of milk production on farms, second only to feed costs (Heinrichs, 1996). Because between 50 and 60% of heifer costs are associated with feed, contracting heifer grazing to another party presents a great opportunity for dairies to reduce costs and improve profitability.

Troy Bishopp, a contract grazer in New York, cites a 2012 Cornell survey of New York organic and conventional dairy farmers, revealing that on-farm daily dairy replacement costs have exceeded \$3.50 and \$2.99 per day respectively, while contracted grazing fees for care are ranging from \$1.00 to \$1.75 per day. “With a 50% cost savings potential from working with [a] grazing professional,” he notes, “a problematic situation turns into an asset for both parties” (Bishopp, 2015).

The period that a dairy heifer may be on the contract grazer's farm can be longer than with beef heifers, and different age groups may be handled simultaneously. In some cases, the dairy-heifer owner may deliver a group of young heifers every month and pick up the pregnant heifers at the same time. Dairy heifers may be younger to start with—perhaps a day-old calf that needs milk or a two-month-old weaned calf. The nutritional requirements for these younger animals are much different from those of a 500-pound beef heifer that is seven months old.

There are targets for weight gain for each age group so that heifers do not become too large or

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too fat. It is crucial for productive dairy heifers to reach a critical body weight at a young calving age. Some dairy experts stress the importance of age at first calving (AFC) as the most important economic trait associated with heifer programs. Increased AFC raises herd costs in three ways: (1) increased days of rearing; (2) increased number of heifers on the farm; and (3) lost production potential (Cady and Smith, 1996).

Breeding Heifers

If breeding the heifers is part of the contract arrangement, make sure this point is written in the contract. In most cases, the owner will supply the semen and breeding supplies. Who will supply the labor for heat detection and breeding? Are you qualified to artificially inseminate the cattle? There should be added value in delivering heifers that are bred on time.

Since breeding is the most complicated part of raising heifers and demands higher levels of management, graziers should consult with experts in dairy heifer development to fully understand the requirements and expectations. More information on raising dairy heifers can be found in the Missouri Extension publication *Dairy Grazing: Heifer Development*. See Further Resources for information on obtaining this publication.

Other Classes of Livestock

There may be possibilities to contract for other classes of cattle. Many dairy farms do not allot enough room for dry-cow management, and some farms may want to move the dry cows to better facilities to reduce management problems.

Another type of contract involves grazing beef cow-calf pairs over the summer, or even year-round for the cows. Typically, there is a monthly fee for the pair, perhaps with an incentive for improved weaning weight of the calf.

Other Considerations

Younger animals, such as stocker calves and heifers, may graze unevenly and be unwilling to graze the pasture down to the desired residual height before moving on to the next pasture or paddock. In some cases, you will have to clip or mow pastures to keep some of the forages from getting too mature before the cattle return to them. Another

way to manage this situation is to allow mature cows, with generally lower nutritional requirements, to follow the younger animals in what is often called a leader-follower grazing arrangement. The younger animals, the leaders in this situation, get turned in first and are allowed to remove the higher-quality forage from the pasture. After the calves are finished, depending on your paddock grazing period, the cows are allowed to follow and eat the remaining forage down to the residual height you want. This method requires less mechanical input to manage the pasture and will reduce the problems of some forages becoming over-mature and less desirable to the cattle. Pay careful attention to the length of your grazing period to ensure the cattle are not on the pasture long enough to negatively affect regrowth.

What is overgrazing?

Overgrazing is grazing before the grass plant is fully recovered. This can occur with too long of a paddock grazing period or returning too soon to re-graze a paddock. The result is the same.

Equipment

Handling Facilities and Scales

Contract grazing requires facilities suitable for handling large animals, minimizing animal stress, and ensuring worker safety. Good facilities allow one person to perform multiple tasks without risking injury to him- or herself or the cattle. Handling sick cattle in a timely fashion will be easier if proper facilities are in place. Depending on the size of the farm and how far the cattle are from a working facility, graziers may want to consider temporary facilities in addition to a central location for receiving and treating sick cattle. Cattle-working facilities do not have to be fancy, expensive, or brand new. What is important is that they are well designed, can withstand repeated use by large animals, and provide protection for both animals and workers. Effective cattle handling facilities have been constructed from materials such as used well pipe (drill stem), timbers, recycled steel silos, guardrail, and railroad ties. It is more important that the facility be built to deal with animal flow patterns and handling requirements than that it be shiny, new, and expensive. Two good resources for corral and working facilities include

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Humane Livestock Handling by Temple Grandin (2008), and *Corrals for Handling Beef Cattle* by Robert Borg (1993). Complete information about these and other facility references can be found in the Further Resources section. The best advice regarding any livestock facility is to plan for future expansion and leave plenty of space for ventilation, equipment, trailers, penning, manure storage, and drainage. Do not shoehorn a new investment into a space too small for it.

Perhaps the best advice when it comes to handling cattle is to prepare your cattle for future handling events (Hibbard, 2016). Temple Grandin has said “every time you are working your animals you are training them. You can train them to be easy to handle or you can train them to be difficult.” Handling cattle in a low-stress environment involves a mindset, and the ability to “read” the cattle. Whit Hibbard, a Montana rancher and editor of *The Stockmanship Journal*, is an advocate of Bud Williams’s low-stress animal handling and stockmanship. Read more about these low-stress principles and techniques at Cattleexpressions (www.cattleexpressions.com/) and Bud Williams Schools (<http://stockmanship.com/>).

Grazing contracts typically include performance standards for the grazer to meet. Therefore, a quality scale that can be certified for commerce is usually a wise investment. In some cases, a truck scale in a nearby community may be sufficient, but few producers who have purchased animal scales have regretted the decision. Once a scale is available, monitoring animal performance is much easier. You do not have to wonder whether the animals are gaining weight and at what rate, or whether they will reach the targets specified in the contract. A scale can be used not only to weigh a group of cattle routinely, but also to compare different groups of cattle on different forages in order to monitor what forages yield better gains at different times of the year. A livestock scale will allow you to be a better manager of both forages and livestock.

A scale can be incorporated into a working facility to weigh individual animals or groups. Position the scale where it can be the most useful to your overall system. Some scales are placed in a working alley to weigh groups of animals; others are placed in line with the working chute to weigh individuals. In most cases, unless individual weights are the only ones of interest, positioning the scale in a working alley to weigh larger

groups as well as individuals will probably give the most flexibility to your system. But keep in mind the cost of a system: alley scales are much more expensive than individual scales. Be sure to do a cost analysis to see if a scale would benefit your operation.

Fencing

Fences are a major investment that can make or break an operation. Time spent designing efficient fencing on the farm will eliminate problems in the future.

The most important fence is the perimeter fence. Additional cost and effort should go into building a quality perimeter fence to ensure livestock will remain on the farm, out of roadways, and clear of neighbors’ crop fields. In most states, a legal fence is defined under state statutes. Talk with your local Cooperative Extension or NRCS office to make sure your perimeter fences are adequate.

Once the perimeter fence is in place, simple interior fences can be built by using a single or double strand of electrified high-tensile wire. Some farms make extensive use of polywire and poly-tapes to subdivide larger pastures. In fact, portable electric fence cable is becoming more popular, especially in the western states. It’s more conductive than poly and is three-and-a-half times as strong. Electric fencing makes it easier to control pasture use and stocking rates and get the most from your forage. Younger animals will typically respect a single wire if they are properly trained, but a double wire may be required to ensure that a few young animals don’t graze ahead of the others. On smaller farms with mature cows and dairy heifers, a single wire can work well. For larger spreads, such as range situations in the West, a single wire may not work due to the amount of labor required for upkeep.

If you are going to use electric fences and the animals you are grazing have not experienced them before, a training pen might be necessary. A training pen, adequately sized for the animals to roam and rest, can have multiple strands of electrified fence—typically made very hot (highly charged) because of the proximity to the barn where the fence energizer is housed. Animals stay in the training pen for as long as needed to become accustomed to the folks working on the farm, to receive daily inspections for health and condition, and to learn to respect the fences. For more information on fencing, see the ATTRA publication

Additional cost and effort should go into building a quality perimeter fence to ensure livestock will remain on the farm, out of roadways, and clear of neighbors’ crop fields.

Water

Water is the most important nutrient and must be in ample supply at all times, or productivity will decline. In fact, cattle require twice as much water when the temperature goes from 70 to 90°F. Behavioral studies show that when cows travel more than ¼ mile to water, pasture utilization and time spent grazing decreases. Pasture utilization will suffer because cattle will graze the part of the pasture closest to the water supply or transit lane, while other portions of the pasture go untouched. Overall grazing time will decline if animals have to spend too much of their time walking to and from water points. If water is readily accessible (usually within 300 feet), animals will travel individually to it as needed. If water is not readily accessible, the entire herd will travel together seeking water. This behavior has an impact on how well pastures are used and how much time cattle spend grazing. Make sure that your pastures have plenty of water sources available. Also, have a backup plan, just in case you lose electricity for extended periods or suffer a pump failure.

Behavioral studies show that when cows travel more than ¼ mile to water, pasture utilization and time spent grazing decreases.

Other Equipment

Depending on your geographic location and local weather patterns, some shelter may be required to protect animals during bad weather, minimize stress, and ensure that proper care can be given to animals entrusted to you. In most cases, a simple pole barn is adequate. Proper ventilation is important, as well as enough room to prevent overcrowding. For grazing animals, a crowded barn can be worse than no barn at all. Protection from the sun and heat stress can also be important in some climates. Remember that if your goal is to maximize gains and you have no trees or other form of shade, your returns will probably begin to suffer when temperatures go above 70°F and stay there for 24 hours or more. Some heat is fine, as long as the cattle can recover during some part of the day or night. With no recovery period, heat stress will accumulate and gains will suffer. Some farms with few shade trees have made portable shades consisting of a durable, lightweight frame covered with shade cloth. Moving the shades helps spread out the impact that large groups of cattle can have on a pasture, and, like water sources, serves as a tool for

cattle distribution. For wind protection you can use windbreaks, both natural and man-made, to provide shelter.

Leasing Pasture

Leasing land for contract grazing is a good option for many graziers due to the fact that there are no ownership costs. Finding land to lease can range from easy to difficult, depending on land-use characteristics and land values. For instance, many rural areas have large tracts of unused land that could be leased from absentee owners or retired farmers. On the other hand, in some regions unused land is a rare commodity due to pressure from developers.

Once you've found land you can lease, you'll probably be asking yourself, "What is a fair market lease price, and how do I find out?" The landowner may know nothing at all about how much to charge for her or his land. There are several ways to arrive at a lease price, and whether your landowner is unsure of what to charge or is financially savvy and up to date on lease prices, knowing how to figure a fair lease is in your best interest.

The land you will lease is more than just a plot of land. Several factors should be considered in determining the lease price. Forage value is one such factor, as is infrastructure. Is the land fenced? Is water developed or will you have to dig a well or, for smaller acreages, run pipes from a municipal source? These things should be kept in mind when thinking about a lease price.

To come up with a lease price, Kathy Voth, founder of Livestock for Landscapes, suggests five methods, each with their own advantages and drawbacks:

- Check the National Agricultural Statistics Service for historical data on pasture rental rates and land values
- Calculate lease price based on return on investment
- Calculate lease price based on forage value
- Calculate lease price based on animal unit months (AUM)
- Calculate lease price based on shared profit and risk, or a seasonal cost based on number of animals and the number of months grazed (Voth, 2015)

Voth works through each of these methods, with calculations and explanations, in her February 2015 blog entitled *How Much Should You Pay to Lease Pasture?*.

Grazing Contracts

A grazing contract is an agreement between you and the livestock owner to perform certain functions over a certain time period for a certain outcome. The contract can be as complex or as simple as both parties agree. What is important about a contract is that it gives both parties a record of what they have agreed to. Some important points to remember about grazing contracts are as follows:

- Contracts can be simple but should be detailed in specifying the expectations of both parties.
- Contracts should include dates of grazing period, number of head, weight of cattle, and grazing fees.
- They should also address issues such as drought provisions, payment schedule, death loss liability, down payments, trucking, veterinary care, treatment of sick animals, worming, fly control, vaccinations, brand inspections, health certificates, animal identification, performance records, method of weighing, shrink, insurance, supplementation, mineral program, fee adjustments, management protocols, and anything else that is discussed and agreed upon (Fulton, 2015).

“The grazing contract is an integral part of the relationship between you and the customer,” says Kevin Fulton, a custom grazier in Litchfield, Nebraska. “Obviously the contract should be one that both parties feel comfortable with and [that] protects the interests of both sides. Generally the custom grazier will provide the contract and I highly recommend that. We have had customers that want to use their own contracts and we have declined to use them. Generally they are not in the best interest of the grazier” (Fulton, 2015).

In the end, a grazing contract is only as good as the two parties involved. If a contract is breached, it is almost always more expensive to litigate than it is to accept the consequences of the breach. This is important to remember when selecting who you are going to do business with. Perhaps the most important skill of a contract grazier is human relations.

Key Points to Consider in a Grazing Contract

Identify the responsibilities of both named parties—who will provide what and when?

Define labor, equipment, and management of livestock, including animal health.

Specify targets appropriate for the type of animals, including weight gains, body condition scores, etc.

Define who will pay for various types of services, such as additional feed, vet bills, medications, trucking, breeding, etc.

Specify the dates that the contract will be in force and the types, sizes, and sexes of animals to be grazed under the contract.

Specify how and where the animals will be weighed; specify any appropriate shrink.

Specify under what conditions the contract can be terminated—by either party—and the notice required to terminate a contract.

Specify how the grazier will be paid after animals are removed and on what basis, such as rate of gain, number of days, or other options.

(Kidwell, 2000)

Prices for Grazing – Setting Your Fee

Calculating prices for grazing services can be difficult, especially for a beginner. The two most common price structures are flat rates and incentive rates (Sellers and Cates, 2013).

Flat rates are used by many graziers; these are constituted by the charges for grazing services on a per-animal, per-day basis. There are many factors that go into figuring a flat-rate charge, and Sellers and Cates (2013) have identified some important ones:

- The estimated value of the land that is being grazed
- The level of labor and number of services provided by the grazier
- The type of cattle grazed
- The weights of the cattle received (cattle that are heavier at receiving are often charged more than lighter cattle, as they typically will be on grass for less time than lighter cattle)
- And, most importantly, the reputation of the grazier

Incentive rates can be applied to a flat rate for special care that is given to the animals by the custom grazier (Sellers and Cates, 2013). These can

Table 2: Custom Grazing Rates for Cow-Calf Graziers in Iowa, 2015*

Land value	2 acres/pair	2.5 acres/pair	3 acres/pair
\$2,500	\$1.08	\$1.29	\$1.50
\$3,500	\$1.42	\$1.71	\$2.00
\$4,500	\$1.75	\$2.13	\$2.50

**Rates include \$0.25 for care provided by custom grazer*

Source: Adapted from Sellers, 2015

be thought of as goals for excellent management, and might include weight gain or high conception rates for heifers. Table 2 shows some custom rates with incentives for Iowa. Average custom rates for your region can often be obtained from your state's Cooperative Extension Service.

"In order to generate a profit, a custom grazier needs to calculate his or her own production costs based upon expected forage yield"

(Bishop, 2015)

There are many variations of rate calculations.

For instance, custom grazier Kevin Fulton's daily fee is a good example of a structure that captures all his costs associated with grazing (Fulton, 2015):

$$(\text{weight of the animal}) \times (\text{forage intake}) \times (\text{forage price}) + \text{daily management fee} = \text{daily grazing fee}$$

The fee can easily be adjusted (and written into the contract) based on animal gain each month and billed to your customer on a monthly basis.

For experienced contract graziers, rates calculated as shown can be beneficial, and can capture all costs associated with the operation, especially if the grazier is highly respected and is known for achieving good results. If you're going to set your price based on gain, it's important to know the cattle you're receiving. Make sure they have good genetics for gaining on pasture and have the ability for compensatory gain.

In almost all cases, the owner is responsible for supplying mineral supplements and covering other costs associated with animal care. However, make sure that the details are spelled out in the contract, where everything is subject to negotiation. If supplemental feed is required, delineate in the contract who will be responsible. In some cases, supplemental feed costs could be subtracted from the grazier's fee at the end of the contract. Other items can also be negotiated. For example, if the grazier is located at some distance from the owner, and supplemental feed is required, the

grazier could be responsible for purchasing acceptable feed locally and billing the owner.

Liability Considerations

Because you as a custom grazier are ultimately responsible for someone else's property, you should have a discussion with your insurance agent to determine your possible liability in a contract-grazing arrangement. Mortality is a common point to include in a contract, but what about theft? Weigh your risks carefully; it may help you sleep better at night knowing that some of those risks are covered.

Economic Projections and Budgets

The following projections and budgets are only starting points for your own economic evaluations, because the numbers used here are simply averages. Based on your geographic location, forage production, and competition, the numbers used may not represent your farm. The budgets have pricing matrices at the bottom to help estimate the break-even points for cost of production. It is important to realize that you need to ensure long-term returns above total costs, since this is where true profitability begins. In the short run, returns above variable costs are important. If an activity has no returns to variable costs, then you should not engage in it, even for a short time. Any return above variable costs could be used to pay for fixed costs, and in some cases, some return to fixed costs is preferred over no return at all.

Budgets

The following budget resources are available online from ATTRA. Contact ATTRA at 800-346-9140 to request a print copy of these budgets.

Beef Stocker Calves

Spreadsheet: www.attra.org/attra-pub/grazingContracts/beef_stocker.xls

PDF: www.attra.org/attra-pub/grazingContracts/beefStocker.pdf

Dry Cows

Spreadsheet: www.attra.org/attra-pub/grazingContracts/dry_cows.xls

PDF: www.attra.org/attra-pub/grazingContracts/drycows.pdf

Dairy Heifers

Spreadsheet: www.attra.org/attra-pub/grazingContracts/dairy_heifers.xls

PDF: www.attra.org/attra-pub/grazingContracts/dairyheifers.pdf

Recordkeeping

Recordkeeping is often ad hoc or even overlooked. But if you are contract grazing, you have the responsibility for someone else's property and you're going to want to substantiate adherence to the contract and back up your price structure. You'll need to document your grazing with a log, along with animal weights, supplements fed, health treatments, and other expenses. A simple notebook or a spreadsheet will work fine for this purpose, based on your own preferences.

Recordkeeping Checklist for Contract Graziers

The items you'll need to keep track of include the following:

- Animal identification and inventory
- Breeding information for heifers
- Health and vaccination information
- Pregnancy testing
- Weights, averages, and rates of gain
- Pasture condition and monitoring
- Pasture usage and pasture and hay costs
- Hay and forage yields
- Purchasing records
- Mineral supplement bills and feeding records

Conclusion

Custom grazing is a great business opportunity for the financially savvy farmer, and it's the perfect business model for someone who is passionate about livestock and land but doesn't have the resources to own a herd. It requires a deep understanding of livestock behavior and management and, to be successful, an advanced understanding of grazing management. The "paperwork" for this type of operation isn't too much to handle, as contracts don't need to be long and complex, and records can be simple as long as you're recording what you need to substantiate your end of the contract. Your income can be more stable than if you were raising a cow-calf herd, and your expenses will be significantly less than operating a dairy.

It's important to stay connected with others who are interested in grazing and animal management. "There are numerous resources you can utilize for input in making management decisions," says Kevin Fulton. "We find that the best resource is forming a network with other graziers that are in the same business as you are. We have learned a lot from interacting with peers and visiting other operations." Seek out field days and farm tours through local Extension, Conservation Districts, and non-profit sustainable agriculture organizations. Attend conferences in the winter when the pastures are dormant but your mind is active. With some research, passion, a little luck, and a network of support, you can be successful in this rewarding business venture.

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Further Resources

General Information on Contract Grazing

Cattle Grazing Survey. 2007. Iowa State University. www.iowabeefcenter.org/research_projects.html

Individual reports on a survey conducted on the following topics:

- *Demographics and management practices*
- *Stocking rates, fees and services*
- *Strategies and implications*

Contract Grazing Fact Sheet Series. 2013. Midwest Perennial Forage and Grazing Working Group. Individual fact sheets can be download from the following links:

The Basics of Contract Grazing

www.iowabeefcenter.org/information/ContractGrazing1Basics.pdf

Evaluating Land Suitability for Grazing Cattle

www.iowabeefcenter.org/information/ContractGrazing2LandEval.pdf

Pasture Rental and Lease Agreements

www.iowabeefcenter.org/information/ContractGrazing3Leases.pdf

Rates Charged for Contract Grazing Arrangements

www.iowabeefcenter.org/information/ContractGrazing4Rates.pdf

Contracts

Livestock Production Contract Checklist. 1996. By Attorney General Tom Miller’s Production Contracts Task Force. Office of the Attorney General, Iowa Department of Justice. www.extension.iastate.edu/grain/topics/Livestock-ProductionContractChecklist.htm

An educational tool for producers considering a production contract. The producer is encouraged to ask the type of questions posed in the checklist before signing a contract.

Pasture Lease—Contract Grazing Agreement. No date. By Polk County Division of Cooperative Extension of the University of Wisconsin-Extension. <http://polk.uwex.edu/agriculture/farm-management/rental-forms-and-agreements>
This form was prepared to assist in reaching and recording a lease agreement.

Resources on Contracts and Sales. Farm Commons. <https://farmcommons.org>

Educational resources to help farmers identify legal issues that affect their operations and break them down into manageable steps. The organization provides resources, tutorials, and legal services, including but not limited to the following documents and resources:

- *Farmer's Guide to Negotiating and Drafting an Agreement*
- *Financing Farmland through an Effective Land Contract: A Toolbox*
- *Drafting A Lease: Questions For Farmers And Landowners To Ask*
- *Farmland Leases Built to Last: Content and Legal Context*

Pasture and Grazing

Extending Grazing and Reducing Stored Feed Needs. 2008. By Don Ball, Ed Ballard, Mark Kennedy, Garry Lacefield, and Dan Undersander. Grazing Lands Conservation Initiative Publication, www.agry.purdue.edu/Ext/forages/pdf/ExtendingGrazing-Auburn.pdf

Extending the grazing season and reducing the need for stored feed is highly desirable. Though the best techniques to accomplish this vary with geographic region, type of farming operation, and other factors, this publication outlines strategies that can be used in some or many areas to extend grazing and reduce stored feed needs, thus increasing profit.

Grazing Systems Planning Guide. 2000. By Kevin Blanchet, Howard Moechnig, and Jodi Dejong-Hughes. University of Minnesota Extension Service. Publication No. BU-07606. www.extension.umn.edu/agriculture/dairy/grazing-systems/grazing-systems-handbook.pdf

This guide discusses the components of a grazing system by taking you through the grazing management planning process. Information on grazing resource inventory, plan development, pasture management, and system monitoring is provided.

Guide to Pasture Condition Scoring. 2001. By Dennis Cosgrove, Dan Undersander, and James Cropper. USDA NRCS – GLCI. www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1044239.pdf

Pasture condition scoring can be useful in deciding when to move livestock or planning other management actions. It sorts out which improvements are most likely to improve pasture condition or livestock performance. This guide, to be used with the Pasture Condition Scoresheet, will help you evaluate current pasture productivity and the stability of its plant

community, soil, and water resources, and assist in identifying what treatment needs, if any, are required to improve a pasture's productivity and protect soil, water, and air quality.

Increasing Forage & Animal Productivity: Holistic Management Grazing Planning. 2007. Holistic Management International. <http://holisticmanagement.org/free-downloads>
Contains the Holistic Management Grazing Planning Manual, an electronic version of the holistic grazing planning worksheet, a livestock production worksheet, and the Holistic Weed Management worksheet.

Management-intensive Grazing: The Grassroots of Grass Farming. 2004. By Jim Gerrish. Order from: The Stockman Grass Farmer
P.O. Box 2300
Ridgeland, MS 39158-9911
800-748-9808
<https://www.stockmangrassfarmer.com/index.php>

The person who coined the phrase "Management-intensive Grazing," Jim Gerrish, uses vivid images and detailed explanations to take graziers step by step through the MiG system. He begins from the ground up with the soil, and advances through the management of pastures and animals.

Missouri Grazing Manual. 1999. By James R. Gerrish and Craig A. Roberts. University of Missouri Extension. Order from: MU Extension Publications
2800 Maguire Blvd.
Columbia, MO 65211
<http://extension.missouri.edu/p/M157>

Readers will find in-depth discussion of the day-to-day practical concerns of grazing management. Included are strategies for improving the quality of pastures and extending the grazing season, soil fertility management and nutrient cycling, water availability and distribution, design and construction of fences, calculation of carrying capacity of pastures, pasture-based sheep production, enhancing wildlife habitat, and more. The manual also introduces readers to the properties of soils, the fundamentals of plant growth and animal nutrition and the economics of beef and dairy production based on grazing as the primary source of forage.

No Risk Ranching: Custom Grazing on Leased Land. 2002. By Greg Judy. Green Park Press. Order from: Stockman Grassfarmer
P.O. Box 2300
Ridgeland, MS 39158-9911
800-748-9808
<https://www.stockmangrassfarmer.com/index.php>

Based on his personal experience, Greg Judy shows how to make a living from the land without owning it.

On Pasture

<http://onpasture.com>

A grazier's weekly source of practical methods of sustainable grazing and inspiration.

Pasture Condition Score Sheet. 2001. By Dennis Cosgrove, Dan Undersander, and James Cropper. USDA NRCS – GLCI. www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1044243.pdf

Scoresheet and instructions for use with the Guide to Pasture Condition Scoring.

Pastures for Profit: A Guide to Rotational Grazing. 2002. By Dan Undersander, Beth Albert, Dennis Cosgrove, Dennis Johnson, and Pail Peterson. Cooperative Extension Publishing, University of Wisconsin-Extension. www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1097378.pdf

To produce good livestock feed from pasture, we must manage our pastures differently. This bulletin outlines an alternative: rotational grazing. By using rotational grazing, you can make a profit from pastures. This bulletin covers the basics of setting up a rotational grazing system on your farm.

Contract Dairy Heifers

Contract Considerations for Dairy Replacements. 1993. Western Large Herd Management Conference Proceedings. Department of Animal and Veterinary Science, University of Idaho, Las Vegas, NV. www.wdmc.org/1993/93WDMC092-99.pdf

Contract-rearing of dairy heifers can allow the dairy operator to focus resources on the milking herd while still maintaining a supply of quality replacements of known genetics.

Dairy Calf and Heifer Association

P.O. Box 1752

Madison, WI 53701

855-400-DCHA (3242)

<http://calfandheifer.org>

The mission of DCHA is to assist member calf, heifer, and dairy/beef producers in improving their herd health and profitability by providing leading edge Gold Standards and “best practices” information as well as industry-leading networking opportunities.

Dairy Grazing: Heifer Development, in Dairy Grazing Manual. 2002. By Stacey Hamilton. University of Missouri Extension. <http://extension.missouri.edu/explorepdf/manuals/m00180.pdf>

A chapter of the Dairy Grazing Manual, this paper details the considerations for developing a dairy heifer development program.

Dairy Heifer Contracting Fundamentals. 2011. By Sarah Roth, Jud Heinrichs, and Coleen Jones. eXtension. [http://articles.extension.org/pages/11670/dairy-heifer-](http://articles.extension.org/pages/11670/dairy-heifer)

[contracting-fundamentals](#)

Advantages of Using a Written Contract, Types of Contracts, Contract Contents, Direct Contract for Raising Replacements, Heifer Raising Agreement

The Economics of Heifer Contracting. 2000. By Robert Moore, Joseph Beiler, and Gary Schnitkey. The Ohio State University Extension Fact Sheet. AS-0006-00. <https://sdda.sd.gov/legacydocs/AgDevelopment/Dairy/PDF/HeiferFactSheet.pdf>

This fact sheet covers issues related to these questions by addressing three topics. First, typical costs for growing a heifer are provided, and then per-day charges that cover a grower's costs are given. This information aids in determining a charge that provides a grower a reasonable return. Finally, how revenues and costs will change when entering a heifer-raising contract are discussed. Ways of justifying the returns and costs also are presented.

Stocker Cattle Production

Stocker Cattle Management: Receiving Health Program. No date. By Jeremy Powell and Tom R. Troxel. University of Arkansas Cooperative Extension Service.

<https://www.uaex.edu/publications/pdf/FSA-3065.pdf>

Sourcing, processing, and health management of stocker cattle are discussed.

Stocker Cattle Ownership vs. Contract Grazing: a Comparison of Risk-Adjusted Returns. 2003. By John D. Anderson, Curt Lacy, Charlie Forrest, and Randy Little. Selected Paper, Southern Agricultural Economics Association Annual Meeting, Mobile, AL. <http://ageconsearch.umn.edu/bitstream/35055/1/sp03an01.pdf>

Stocker cattle ownership is compared to contract grazing using stochastic simulation. Returns are evaluated for both cattle owners and caretakers in contract grazing agreements. For caretakers, contract grazing is significantly less risky than cattle ownership. For cattle owners, contracting reduces risk only slightly while significantly reducing expected returns.

Corral Design, Handling Facilities, Fencing, and Water Equipment

Beef Housing and Equipment Handbook, 4th edition.

1987. MWPS-6. <https://www-mwps.sws.iastate.edu/catalog/livestock-operations/beef/beef-housing-and-equipment-handbook-pdf>. Order from:

MidWest Plan Service (MWPS)

4306D Elings Hall

Iowa State University

Ames, IA 50011-3080

515-294-4337 / 800-562-3618

Current agricultural engineering recommendations are summarized in this complete housing guide. Essential components

for an efficient operation such as building design, operation size, and equipment are discussed. Figures, tables, and discussions to help improve, expand, and modernize an operation are included. Topics cover cow-calf, cattle handling, and cattle feeding facilities; feed storage, processing and handling; water and waterers; manure management; farmstead planning; building construction and materials; ventilation and insulation; fences; gates; and utilities.

Cattle Behavior During Handling and Corral Design for Ranches. No date. By Temple Grandin. In: Beef Cattle Handbook. Extension Beef Cattle Resource Committee. University of Wisconsin-Extension, Cooperative Extension. www.iowabeefcenter.org/Beef%20Cattle%20Handbook/Cattle-Behavior_Handling.pdf

An understanding of cattle psychology combined with well-designed facilities will reduce stress on both you and your cattle. Reducing stress is important because stress reduces the ability to fight disease and gain weight. It also increases weight loss, damages rumen function, and can interfere with reproduction. This paper deals with the principles of livestock behavior as they affect the design of handling facilities and systems to reduce stress.

Corrals for Handling Beef Cattle. 1993. By Robert Borg. Alberta Agriculture, Food and Rural Development. Agdex 420/723-1. Edmonton, Alberta, Canada. [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/agdex27?opendocument](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex27?opendocument).

To order: 780-427-0391

This best-selling book features information on cattle behavior, handling techniques, corral design, corral geometry and corral components. It has more than 60 designs and corral plans. It has been reviewed by industry experts including Temple Grandin, the internationally recognized expert on cattle behavior from Colorado State University.

Electric Fencing for Serious Graziers. 2005. USDA Natural Resources Conservation Service, Missouri. www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_010636.pdf

Download in PDF or order from:

USDA NRCS

601 Business Loop 70 West, Suite 250

Columbia, MO 65203

Topics include selecting an energizer, grounding, selecting wire, temporary fencing, gates and braces, tools, safety, and troubleshooting.

Fence Systems for Grazing Management 1: Electric Fence Energizers. No date. By James R. Gerrish. In: Beef Cattle Handbook. Extension Beef Cattle Resource Committee. University of Wisconsin-Extension, Cooperative Extension. www.iowabeefcenter.org/Beef%20Cattle%20Handbook/Electric_Fence_Energizers.pdf

This chapter deals with fence energizer selection and proper installation. Fencing materials and construction are covered in individual sections in this manual.

Humane Livestock Handling. 2008. By Temple Grandin. Grandin Livestock Handling System, Inc.

www.grandinlivestockhandlingsystems.com/index.html

Order from:

Temple Grandin, Ph.D.

2918 Silver Plume Drive, Unit C3

Fort Collins, CO 80526

970-229-0703

Temple Grandin's book, Humane Livestock Handling, explains animal behavior principles to reduce stress on your animals and contains layouts of corrals for ranches, feedlots and meat plants; designs for large and small beef cattle operations; and complete instructions and illustrations to show you how to build chutes, loading ramps, fences, gates, latches, crowd pens, and sliding gates. It also contains sheep and bison layouts.

Selection of Alternative Livestock Watering Systems. By Robert T. Burns and Michael J. Buschermohle. Agricultural Extension Service. University of Tennessee. <http://utbfc.utk.edu/Content%20Folders/Beef%20Cattle/Facilities%20and%20Handling/Publications/Facilities/PB1641.pdf>

Several options are available to producers when choosing a livestock watering system. These systems can be divided into three basic types: direct access, gravity flow, and pressure systems. The best system type for a particular producer will depend on many factors, including site layout, water requirement, availability, and cost of utility water and electricity, as well as water-source type and location. This publication provides basic descriptions of some livestock watering system alternatives, and discusses some of the positive and negative aspects of each.

Shade Options for Grazing Cattle. No date.

Larry W. Turner. University of Kentucky Cooperative Extension Service. www.bae.uky.edu/Publications/AEUs/aeu-91.pdf

Includes a research report and plans for building a portable shade for livestock.

Stockmanship Journal

www.stockmanshipjournal.com

A journal devoted to the art and necessity of handling livestock in a low-stress manner. An essential skill to acquire for overall profitability.

Watering Systems for Serious Graziers. 2006. USDA Natural Resources Conservation Service, Missouri. https://prod.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1144213.pdf. Download in PDF or order from: USDA NRCS

601 Business Loop 70 West, Suite 250

Columbia, MO 65203

Topics include livestock water needs, water sources, delivery systems, tanks, protecting watering areas, tank location, installing pipes, and spring water development.

Grazing Budgets and Economic Information

The Economics of Rotational Grazing. 2005. By R.W. Eldridge, Kenneth H. Burdine, and Richard Trimble. University of Kentucky Cooperative Extension Service. www.caes.uga.edu/commodities/fieldcrops/forages/events/GS11/11/UKY%20-%20rotational%20grazing%20economics.pdf

Cost and revenue considerations for developing a partial budget for grazing.

Stocker Enterprise Budgets for Grass-Based Systems. 2001. By Schuster, Undersander, Schaefer, Klemme, Siemens, and Smith. University of Wisconsin Extension.

<http://learningstore.uwex.edu/assets/pdfs/A3718.pdf>

This publication examines the economics of management intensive rotational grazing for stocker operations. Tables are included that show the effect of changes in key variables (price spread and weight gain assumptions, particularly) on the expected profitability of using management intensive grazing in stocker operations.

Appendix 1: Responsibilities to Be Defined in a Contract Heifer-Raising Agreement

By Fay Benson, Cornell University Cooperative Extension

Items which must be spelled out in writing include:

- How animals are identified.
- Pre-arrival treatment or conditioning required (perhaps a minimum health standard to protect other livestock at the facility, dehorned before arrival).
- Transportation in and out, who arranges, who pays.
- Insurance coverage, who provides, what perils, how is uninsured loss dealt with.
- Age and/or stage of gestation at departure.
- Growth rate expected, how defined, how monitored, penalty if not achieved.
- Heat detection, what systems are used and what is success rate, is there a plan for problem heifers (e.g., Prostaglandin if not bred by x months), who pays for problem resolution.
- Insemination, what age or size at first service (Holstein example, breed first heat after 13 months, 131 cm and 360 Kg), who does, who pays, how are repeats dealt with.
- Semen, who selects sire, who pays.
- Pregnancy checking, done when, who pays.
- Vaccinations, what, when, who does the work, who pays.
- Parasite control program, what, when, who does the work, who pays.
- Hoof trimming, what, when, how is need determined, who does it, who pays.
- Non-routine health care for sick animals, who does what, who pays.

- Death losses, who pays (common suggestion is if owner loses calf, feeder refunds all raising costs).
- Access to animal for other procedures such as embryo transfer (ET) work, display for sale, how arranged, notice required.
- Access by owner to view heifers and monitor program (Sunday afternoon inspections are a major time commitment and infringement on weekend privacy according to experienced custom feeders).
- Notice required for either party to terminate agreement.
- Rate of payment for custom feeding services, are arrival and departure dates included, what costs in addition to feed, bedding, utilities, labor and housing are included.
- Frequency of billing and time frame within payment is due.
- How and when can rates be adjusted or renegotiated (notice given, new rates for new animals only or all animals etc.).
- Method used to arbitrate disputes.

Other Things You Might Ask About Include:

- Who else has heifers in facility and on what terms are new clients added.
- Feed, who supplies, what quality, how tested and balanced, are there nutritional consultants used.
- Bedding, who supplies and what is used.

Fay Benson is a Small Dairy Support Specialist with in Cornell University Cooperative Extension's South Central NY Regional Team in Cortland, NY. He may be reached at 607-753-5213 or by email at afb3@cornell.edu.

Appendix 2: Sample Contract-Grazing Agreement

Contract-Grazing Agreement

This contract is for the purpose of custom grazing heifers belonging to _____ (referred to as “owner”) on property belonging to or leased by _____ (referred to as “grazier”). This contract takes effect upon the signing date and remains in effect until all the heifers are redelivered to owners.

1. Owner will send grazier ____ head of approx. ____ lb. average weight steers/heifers on _____ and pick them up by _____, dependent on pasture and weather conditions.
2. Cattle owner will make monthly payments of _____ (depending on 30 or 31 days/month) to grazier to be paid by the 1st of each month beginning _____ and through _____. Balance of payment is due within 10 days of cattle redelivery date. Grazing rate will be _____ per day.
3. Grazier agrees to provide adequate feed solely as pasture for owner’s animals through end of _____, except in a situation of severe drought.
4. If a severe drought is developing, the grazier will notify the owner. The owner may either remove the animals or provide feed to get through the drought. Feed costs will be deducted from the grazing payments above (paragraph 2).
5. Owner will administer any vaccines prior to arrival and provide the grazier any external parasite control he wishes to be used.
6. Grazier will administer external parasite controls with his facilities if requested.
7. Owner to provide mineral if he desires it to be fed. Salt will be provided by the grazier.
8. Owner will pay for any veterinarian costs, antibiotics administered, and all ancillary expenses throughout the grazing period. If for some reason grazier must supply additional labor above and beyond normal animal care, it will be billed at \$____/hr.
9. Owner will pay for all shipping, scale fees, and any buyers or sellers fee.

10. Owner will pick up any animal considered wild, chronically sick, or not maintaining the habits of the group.
11. Owner will be able to pick up the cattle at any time if he feels they are not being taken care of.
12. Owner will acquire an insurance policy on the cattle covering fire, lightning, wind, and storm, or be responsible for loss due to the same.
13. Owner will acquire an insurance policy on the cattle covering theft, vandalism and liability, or be responsible for loss due to the same.
14. Owner agrees to assume all legal responsibility as owner of the animals and will not hold the grazier liable for any injury or death loss to the animals, except those due to negligence on the part of the grazier.
15. Grazier will provide the receiving facilities, treating chute, sick pen facilities, feeding equipment, grazing pastures, and shipping facilities.
16. Graziers goal will be to put _____ pounds or more of gain per day on each steer or heifer.
17. Grazier, or individuals under the supervision of grazier, will personally care for the animals on a daily basis and will not contract the work out to another party.
18. In the event that the owner is unable to make payments due and owing to the graziers, then the grazier may hand pick heifers from the owner’s herd and retain ownership of some to the dollar value required to cover the past due account. Value of animals will be determined by actual value at the time of transfer of ownership from owner to grazier.
19. If a situation arises which owner and grazier cannot agree upon, the disagreement will be refereed/arbitrated with a third party mutually chosen by owner and grazier.

Contract adapted from a handout at the 2015 Northeast Contract Grazing Summit "Real opportunities and perspectives from real grazing practitioners and customers," March 28, 2015, Morrisville, NY. This sample contract is provided as an example only. It is not intended to be a ready-made template, as each contracting situation is different. ATTRA does not accept or assume legal liability for any use of this sample contract.

Grazing Contracts for Livestock

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