Potential mob graziers should consider precautions

by Hugh Aljoe / hdaljoe@noble.org

Allan Savory states in his book “Holistic Management” that stock density is the most under-utilized tool in grazing management implying that most graziers have yet to experience the full range of benefits possible from this tool. There are reasons for this; primarily, they have not taken time to use this tool at the ultra-high level. However, in recent years a few graziers have begun tapping into the potential of “mob grazing,” or ultra-high stock density (UHSD) grazing, touting its benefits in the popular press and stirring up interest and questions from livestock producers. For those who are considering giving UHSD grazing a try, here are a few precautions to ponder before you proceed.

1. **UHSD is not for the novice grazier.**
   One needs to have the infrastructure in place to manage the entire herd in close proximity. You need to have adequate pen and corral space, adequate drinking water and recharge capabilities, adequate fencing with quality energizer to carry electricity to extremities of property, plenty of temporary electric fence supplies and appropriate equipment to quickly deploy it, AND some experience in managed multi-paddock grazing.

2. **Start with a goal in mind.**
   With UHSD grazing, the focus is often on the landscape (herd impact), but there should also be emphasis on livestock performance. You don’t have to sacrifice performance to achieve landscape goals. Determine what the important outcomes are and how they will be measured. Monitoring instruments include grazing records, other observational records, photo points, soil samples and range-land health tools, grazing exclosures, livestock production measures, etc.
3. UHSD grazing does not mean ultra-high grazing intensity. In fact, it is just the opposite. Grazing intensity should actually decrease and the residual material should increase but with a high proportion of it left at or on the soil surface due to herd impact. Grasses should be top-grazed, taking the upper one-third of the plant in most instances. Cattle are moved to fresh grazing areas frequently, with multiple moves per day. Due to herd impact, recovery periods are usually longer thus lengthening grazing cycles, especially areas impacted during wet periods.

4. UHSD grazing requires adequate forage quantity to begin. Set the initial stocking rate conservatively based on forage availability. Increase stocking rate only after forage production increases measurably. It is a good practice to learn how to apply UHSD grazing on something less than the whole. It doesn’t have to be an “all or nothing” approach. Cattle have to learn, too; it takes them a couple of weeks to adapt their grazing behavior to fit UHSD grazing. Best livestock performance occurs when a consistent routine is established.

5. There is no known “magical” stock density value that expedites the desired outcomes, but the greater the stock density then the greater the herd impact. There is much ado in popular trade magazines about grazing at stock densities exceeding 1 million pounds of live animal per acre. At that stock density, the cattle have to be moved multiple times per hour per grazing period. One needs to fit UHSD grazing to their operation, management plan and labor capabilities. Implement UHSD grazing on areas where you want herd impact when convenient to management.

UHSD grazing is a management tool, an approach to managing livestock on a land resource area that allows herd impact to be the catalyst for a beneficial outcome. It is not a system to replace management deficiencies. UHSD grazing requires the best of management to achieve both landscape and animal performance goals. It is an adjustable tool to be used with a high degree of skill and flexibility. When beginning UHSD grazing, there will be much trial and error – and much to learn. For more information about UHSD grazing, read “Holistic Management” by Allan Savory.

ALJOE’S DEFINITION OF ULTRA-HIGH STOCK DENSITY:

Ultra-high stock density grazing is the management tool of grazing livestock in much higher than normal concentrations to achieve landscape-focused objectives with the long-term goal of enhancing soils, forages and livestock production. It is usually expressed in pounds of live-weight per acre at a given moment in time. Depending on the environment and forages, ultra-high stock densities are usually in excess of 100,000 pounds of animal live-weight per acre with some graziers exceeding 1 million pounds per acre thus requiring multiple moves to fresh pasture daily.
Replacement heifers are the hot topic at most rancher gatherings these days. Where to find quality, dependable and reasonably priced females is always a concern. All too often, producers are still selecting and developing their replacement females the same way dad and granddad did 75 to 100 years ago. This method can still work if you are not too concerned about the profitability of your cattle operation, but we have better, more reliable and profitable methods available for selecting and developing females for the cattle business today. Proper selection will affect ranch profitability for the next 10 to 12 years, the productive life of that heifer. Treat replacement heifers as a valued employee in your ranching business, and she will be a more profitable member of your ranch team in the future. Consider selecting and training a heifer like you would an employee.

“Interview” the heifer similar to how you would a new ranch hand. Make a list of all the traits that you want your heifer to have in order of economic importance and make sure she is able to meet most, if not, all the traits. If she doesn’t have all the desired traits, decide if you can “train” her to fit your needs. Does that training involve giving her proper vaccinations or more feed to achieve a desirable body condition score prior to calving? If she does not have the desired traits, you should not hire her for the job on your ranch. If she is the wrong type or the first calving date is too late, then it does not matter how cheap you can buy the heifer, she simply does not fit your program. One option available to modern-day ranchers that was not available to granddad is to DNA test the heifer before making a commitment to her. This is one of the best ways to make sure you are hiring the right female for the job who will be successful with the job description she has to work within.

Next, you need to keep in mind that every employee requires a training period to learn the job; a heifer is not different. This involves making sure she has had correct and timely vaccination and deworming after she arrives on the ranch and before calving season. Additionally, you will need to make sure you continue to feed her to reach or maintain a Body Condition Score (BCS) of 6 by calving. A BCS of 6 is important in order for the heifer to be able to rebreed in a time with the early calvers of the main cow herd. This is a difficult task for the replacement heifer since she is lactating, still growing, and trying to go through the process of uterine involution and healing, all while she is losing her baby teeth. Even a properly developed heifer can have calving difficulty or not rebreed if the buyer of the heifer does not keep her on a high enough plane of nutrition through the second breeding season.

Remember for any employee to be successful in their job, they must initially fit the job position and then be trained properly to do the job. In order to have a good “employee,” you must consider the following characteristics for your new employee to work for you: phenotype, genetics/breeding (DNA test), health and vaccinations, sire of gestating calf and expected first calving date, how was she developed, and finally, price. The old adage is very true, your cows must work for you 365 days a year, so make sure she fits the environment and management in which she is expected to work.
Planning readies ranchers for farm economy downturn

by Dan Childs / mdchilds@noble.org

The United States Department of Agriculture is forecasting net farm income in 2015 to be $55.9 billion, a 38.2 percent drop from the previous year. This is the single largest year-over-year drop in net farm income since 1983. Back in 2013, net farm income was a record $123.3 billion. The 2015 forecast is 55 percent lower than in 2013. I do not want to sound like Chicken Little and say the sky is falling, but the agricultural sector of the United States economy is transitioning to a substantially lower level of profitability and prosperity. What can agricultural producers do to position their operations to survive the downturn in profitability with as little stress as possible?

The first step is to be sure you know what your individual net farm income is. This information does not generally come from your income tax return. As farmers and ranchers, we are pretty savvy at managing taxable income, although the last few record income years has challenged us a bit. Many producers have a year or two production of raised grain in storage or have deferred cull cow and/or calf crops into the next year to defer income. Some producers may also have paid ahead expenses to reduce income. Therefore, looking at the 2015 income tax return may still show normal or above normal income if some extra grain was sold, part or all of last year’s and this year’s calf crop was sold, or fewer expenses were paid ahead. The tax return will give a false indication of the true profit of the farm business if these tax strategies were employed. Caution must be observed to be sure of what your individual net farm income is. This information does not generally come from your income tax return.

A second step is to manage the debt load. During prosperous times, producers tend to purchase assets for a number of reasons such as upgrading to a newer model, improving efficiency or maybe to reduce the tax bill. Oftentimes, profits pay for most of the purchase price of the new asset and the rest is added to debt. During periods of lower profitability, as is forecasted for the next few years, it becomes harder to service debt. The United States Department of Agriculture Economic Research Service is forecasting both real estate and non-real estate debt to increase in 2015 – each by more than 6 percent with non-real estate debt to outpace real estate debt. When combined with a decline in asset values of both real estate and other farm assets comprised mainly of inventories and machinery/vehicles, farm sector debt-to-equity ratios will rise. Strategies for the next few years may include selling any unneeded machinery, justifying any purchases with strong supporting financial forecast and keep making timely payments with extra principal when possible. Cash seems always to be king but in periods of volatility and lower commodity prices, a strong liquidity position can reduce the financial stress and prepare the farm business to be ready to take advantage of the next rise in profitability.

There are many ways to position the farm business in anticipation of lower profitability, but the last step discussed here is to spend a bit more time analyzing. During the last few years, essentially all beef producers had to do to make money was to own cattle. The beef industry is building the cow herd, increasing the calf supply and producing more beef per cow. The price outlook for calves and feeders is to trend lower. It is easy to get addicted to $200 to $300 or more per head profits. There are profits to be had in the next few years but likely not at the levels per head experienced in recent years and likely only after some detailed enterprise budgeting. A friend of mine summed it up best by stating that cash flows are going to turn into cash trickles. Keep in mind what got you to where you are now. We are known by our work ethic, our word, our belief in our Maker and respect for our fellow man, and as trusted caretakers. These virtues have served us well. The sky is not falling, but more challenging times are ahead. Best wishes for a happy and prosperous new year.
Leasing for waterfowl supports watershed conservation
by Josh Gaskamp / jagaskamp@noble.org

Recreational leases have gained popularity in Texas and Oklahoma because they provide additional income and support land management goals. Recreational leases for waterfowl are not uncommon, and committing one or more water resources to this practice may help promote good land stewardship.

Unfortunately, in most areas, the days of knocking on a landowner’s door and gaining permission to hunt are gone, and waking up at 3 A.M. to beat other hunters to the best spot on public land can age a hunter quickly. Because hunters are looking for something more stable and convenient than the hassles of public land hunting, finding interested hunters may be easy.

The price for access to hunt waterfowl is highly variable and dependent upon a number of variables including but not limited to the number of water bodies available to hunt, acreage, quantity and variety of birds, consistency of birds, quality of hunting, blinds, and other amenities offered. Some landowners may grant access in exchange for labor or habitat improvements, while others try to optimize income from leased hunting and commonly charge $25 to $100 per acre for access to waterfowl impoundments.

Waterfowl hunting opportunities for avid hunters can be limited due to competition on public hunting areas, low availability of quality habitat or water, or low abundance of birds. Hunters who want a place to go for a quality hunting experience may consider leasing access to private property. Furthermore, because hunters place high value on having a spot with stability, convenience and exclusive access, they are often interested in improving habitat to attract more birds.

Some impoundments are more attractive than others to perspective lessees. Making impoundments more attractive to perspective lessees means making them more attractive to waterfowl. Aquatic vegetation is one of the most important characteristics when attracting waterfowl to an impoundment. Some landowners decide, in lieu of grazing to the water’s edge, it may be more profitable to conserve aquatic and shoreline vegetation, and maintain good water quality to earn income from leased hunting.

For most producers, leased waterfowl hunting is not the primary source of income for their properties, thus making a decision to lease waterfowl hunting rights may require an assessment of current agricultural practices. Certain practices limit habitats suitable for waterfowl or waterfowl hunting. Wetland ecosystems can be sensitive to disturbances such as those created by congregations of grazing animals. If livestock have unlimited access to wetlands, they commonly impact plant composition and abundance. Overgrazing and excessive trampling of plants in watersheds, streams or impoundments may lead to poor water quality (muddy ponds hinder growth of aquatic plants) and increased soil erosion. Eroded or bare soil watersheds also make poor waterfowl habitat. Fencing livestock out of impoundments is one way to ensure watersheds and water interfaces maintain vegetative cover. If livestock need access to water in an impoundment, creating a water access point that funnels all of the activity to a small, stable portion of the pond bank is an option. See how to construct a livestock water access point at http://bit.ly/nf-ge-96-02 and http://bit.ly/nf-ge-97-01.

Planning to establish lease-worthy impoundments can improve your stewardship of the resource, generate a new source of income for the property and create relationships with hunters willing to lend a hand when it comes to wildlife conservation on your property.

Balanced fertilization program supports pecan growth

by Charles Rohla / ctrohla@noble.org

This article originally appeared in the Jan. 2010 Ag News and Views newsletter.

Fertilization is just one pecan management practice that helps maximize crop production (load) and provides optimal tree maintenance. Proper fertilization encourages growth of shoots and leaves, which is essential for increasing crop load and decreasing tree stress. During poor crop years, fertilization is the one practice that producers tend to overlook.

In the past, it has been suggested that when nutrients are applied, those nutrients are used for the current year’s crop. New research conducted by Mike Smith, Ph.D., at Oklahoma State University suggests that nitrogen applied during the current year is used by trees for the following year’s crop. Generally, during heavy crop years, growers would apply fertilizer multiple times to ensure that nitrogen was available for uptake since it is typically the most limiting nutrient.

Currently, nitrogen is recommended as a single application, though split applications are recommended in areas that are prone to flooding. Some have recommended fertilizing an additional two to three times per year for certain varieties during heavy crop years; however, no research has been conducted to confirm this information. New research has been conducted evaluating the efficiency and absorption of nitrogen and other essential nutrients that affect pecan growth and production.

Research indicates that nitrogen storage in plant tissues is the primary source of nitrogen used during initial spring growth in pecans, and that nitrogen absorption rapidly increases when stored nitrogen pools are nearly depleted. This means nitrogen demand is greatest when nitrogen stores are being replenished and this normally occurs in the early spring during periods of rapid growth and leaf expansion. In fact, researchers estimate applied nitrogen uptake in trees ranges between 12 and 27 percent. It has also been reported that applied nitrogen is mainly transported to stored nitrogen pools that will be used during the next growing season. The combination of these studies suggests that for trees to maintain a balanced nutrient level, the best time to fertilize is before budbreak (late February to early March).

Even though nitrogen is critical, remember that a balanced fertilization program is crucial for healthy productive trees. Therefore, growers need to manage the following nutrients to ensure a successful orchard:

- Phosphorus (P) is important for nut growth, minimization of leaf scorch (imbalance of N:P) and early defoliation. Deficiency in P is rare; however, adequate levels are needed to maximize production.
- Potassium (K) is used in transporting carbohydrates and is directly linked to kernel oil content. During heavy crops, K shortage can lead to leaf scorch and early defoliation. Shortages are common and require several years to correct.
- Zinc (Zn) deficiencies are common in all areas of pecan production. Trees in soils with low pH will respond to soil-applied Zn. Trees in soils with a higher pH will not respond to soil-applied Zn and require foliar sprays.
- Boron (B) is more of a problem in excess than in shortage. Irrigation water should be tested for high B levels.
- Manganese (Mn) deficiencies have been identified along the Red River and greatly decrease pecan production in affected areas.
- Nickel (Ni) is utilized in converting urea to ammonia. Therefore, if urea is used in an orchard with nickel deficiency, urea will not be converted properly and will result in toxicity.

To ensure that you have healthy and properly fertilized pecan trees, it is recommended that you collect leaf samples for analysis in July. The level of nutrients that will be needed the following year depends on the results of the analysis. Cumulative results of yearly leaf samples will enable optimal management of the nutritional levels of trees, potentially decreasing input costs over time.

For more information on how to fertilize pecans or how to take a proper leaf sample, contact the Noble Foundation at 580-223-5810.
New institute launched to help improve soil health

Staff writer

With more than 1 million organisms in a single teaspoon of earth, soil is the starting point for plant, animal, and human life. It is the foundation for society, providing the basis for food production, healthy families and economies.

To ensure that soil continues to be a vital natural resource for generations to come, The Samuel Roberts Noble Foundation and Farm Foundation, NFP, announced the formation of the Soil Health Institute on Dec. 3, 2015. The announcement coincides with World Soil Day (Dec. 5) and celebrates the 2015 International Year of Soils.

The Soil Health Institute’s mission is to safeguard and enhance the vitality and productivity of the soil. It will work directly with conventional and organic farmers and ranchers, public- and private-sector researchers, academia, policymakers, government agencies, industry, environmental groups, and consumers—everyone who benefits from healthy soils.

The organization will serve as the primary resource for soil health information, working to set soil health standards and measurement, build knowledge about the economics of soil health, offer educational programs, and coordinate research in all aspects of soil and soil health.

“Leonardo DaVinci once mused ‘We know more about the movement of celestial bodies than about the soil underfoot,’” said Bill Buckner, president and chief executive officer, Noble Foundation. “Hundreds of years later that sentiment is just as accurate. The Soil Health Institute will provide much needed research funding so we can better understand our soil. We will make that research publicly available, so we can work together to provide solutions for improving our soil and protecting it for our children and grandchildren.”

The Soil Health Institute is an evolution of the Soil Renaissance, an initiative established in 2013 by the Noble Foundation and Farm Foundation to advance soil health and make it the cornerstone of land use management decisions. The Soil Renaissance brought farmers, ranchers, soil scientists, economists, environmental interests, agribusinesses, NGOs and government agencies together to examine the role of soil health in a vibrant, profitable, sustainable natural ecosystem.

Their work identified the need for a national organization to serve as a hub for measurement standards, economic data and coordinated research.

“There are many short-term initiatives in progress that are regionally focused or examining only selected elements of soil and soil health,” said Neil Conklin, president, Farm Foundation. “The Soil Health Institute will be a permanent organization that will coordinate the long-term work needed in this area.”

The Noble Foundation will continue to provide financial support for the new institute. Next steps will be to broaden the base of involvement with both private and public entities to provide necessary funding for the Soil Health Institute’s activities.

How Can You Help?

For more information about the Soil Health Institute, visit www.soilhealthinstitute.org.
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<th>EVENTS</th>
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<tr>
<td><strong>Prescribed Burn Workshop</strong></td>
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<tr>
<td>Time: 8:30 a.m.-5 p.m.</td>
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<td>Date: Jan. 26, 2016</td>
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<td>Location: Noble Foundation Oswalt Road Ranch, Marietta, Oklahoma</td>
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<td>Registration Fee: $20, includes lunch</td>
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<tr>
<td><strong>Integrity Beef Alliance Meeting</strong></td>
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<td>Time: 5-8 p.m.</td>
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<td>Registration Fee: $30 for nonmembers</td>
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<td><strong>Texoma Cattlemen’s Conference</strong></td>
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<td>The Cattle Industry: Evolving through Innovation and Technology</td>
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<td>Time: 9 a.m.-4:15 p.m.</td>
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<td>Location: Ardmore Convention Center</td>
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For more information or to register, please visit www.noble.org/agevents or call Maggie Scott at 580.224.6375. Preregistration is requested.