

## Illinois Grazing Manual Fact Sheet

### GRAZING MANAGEMENT

# Pasture Management System Layout



### General Information

How would you layout your pasture management system? Every farm can have its own unique design. These systems can all vary somewhat because of land formations, soil types, topography, and whether there are creeks or streams intersecting the farm, etc. However, when designing any of these systems, there are some guiding principles that we as planners use when we assist you, the client or producer, in setting up a grazing system.

1. Install a good permanent perimeter fence.
2. Keep travel distance to water less than 800 ft. for beef cattle, and most grazing livestock, except closer for lactating dairy animals.
3. Try and make your pastures (paddocks) as square as possible, for more uniform grazing versus narrow rectangles or triangle shapes.
4. Follow the topography, or soils map lines, with the division fences when possible.
5. Buy quality materials, even when using temporary fencing and watering equipment.
6. Avoid placing the mineral feeders next to the water source, or shade. Use the mineral to draw livestock to underutilized areas.
7. Fence the creeks, streams and ponds separately. This is done for management purposes, not necessarily for total exclusion. Flash graze these areas for 2 days or less in a rotation.
8. When locating water points, position for multiple paddock usage along division fences, when possible. Then protect the area around tanks with gravel and fabric.
9. Locate gates in fence corners for better livestock flow.
10. Divide pastures with a single electric smooth wire (12.5 gauge high tensile for main divisions). Temporary fencing can be used for final pasture subdivisions.
11. Never electrify barbed wire, both for the liability of it and the barbs tend to lose electric current.
12. Buy a heavy enough, (larger) charger to carry the entire fence you have as well as high enough voltage for the animal species that you are trying to control.

### Consider These Steps

First you should install a good perimeter fence on the farm or pasture. This is needed to naturally keep the animals in and reduce liability issues. I know, and can appreciate, the challenges of a livestock owner that is surrounded by grain farmers that fail to see the need to assist in this issue, also. Good fences make good neighbors!

Secondly, keep travel distance to water less than 800 ft., or the cattle will use more energy getting there than they will get from the water. The shorter the distance, the less of a herding effect will occur. The animals will tend to drink one at a time more, at this distance or less. This will also



allow you to use smaller, more portable tanks. The water is usually the most limiting factor of any system. Once that is worked out, the rest will be fairly easy because the fences can be ran most any direction. Try to locate the water points along division fences for multiple paddock/pasture usages. You may want to lay a water line above the ground the first year or two, before burying it, to test and see if that is the location that you truly want it in.

Thirdly, try to make the pastures as square as possible. Avoid long narrow paddocks. The length should always be less than 4 times the width. The more square the areas, the less fence it will take. Also, the animals will graze the areas more uniformly. Keeping the paddocks square will aid in minimizing grazing time and effort and will lessen trampling damage. Always use 12.5-gauge high tensile wire for your main feeder wires. High tensile wire will last longer than barbed wire, as it has a category 3 coating of galvanizing, or three coats. Most barbed wire has only one coat. Never use the poly wires or tapes as a main feeder wire because the resistance to the current is dramatically greater due to the size of the wires. These temporary products are handy and easy to use for portable locations; just try not to restrict the current, as it may be needed at some outer point in the system. Always use good grounding equipment and follow the instructions on the installation of the ground rods and lightening chokes!

The layout of the division fences will be affected by how the pasture lays both topographically and physically. The bottomland soils will produce differently than the sloping land, bluff areas, and the flatter ridge tops. Subdividing along these landforms (sloping areas) can allow you better management options. This can give you an opportunity to vary the days that each pasture is grazed. Sometimes the soil maps of your pastures can help guide you as to the location of the fences. Topographic maps are also a good aid. I always want to walk the pasture with the producer to see how everything lays and what is physically there. This will give the planners, an opportunity to give the producers better alternatives. For easy entrance or exits, place the gates in the corners of the pastures.

Ted Funk, U of I Extension Engineer, always says “buy gadgets but buy quality” when it comes to materials. The low impedance fencers are very effective and will be powerful enough to carry several miles of fence. Be sure that you buy the correct size fencer for your needs or one a little larger in case you add more fence or further subdivisions later. If a fencer is rated in miles of fence, that distance is equal to that many miles of a single wire of fence. A five-wire fence has five times the distance in power generating requirements. Example: 1320 ft. of single wire is just that; a five-wire fence 1320 ft. long is equal to 6600 ft., if all wires are electrified. Don't short your fence by using too few ground rods and lightening chokes and arresters in the fencing system. You will need at least three rods for your charger and always have one more ground rod for your fence than was installed for your charger. NRCS Fence Standard 382 suggests burying 3 foot of ground rod per joule of rating on your charger.

You should fence the streams, creeks and ponds separately. These areas can be used for a corridor to link the paddocks together and/or to limit the animal access to the water body as a loafing area. The area will be grazed, but only allow a brief period in the grazing cycle, one or two days depending upon the size of the area and number of animals. If a creek is the water source, we can design a watering point in it. This design will consist of armoring one point to use as the water point with electric fencing around it, thus minimizing the animal impact on the remainder of the stream or pond.

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In summary, in most cow/calf, sheep and goat operations, 8-12 pastures/paddocks will work well for improving the gains per acre and the return on your investment. This allows for a longer rest period and will work well to prolong the forage stand. This also will improve water quality and other environmental benefits. In a stocker operation, the calves will need to be moved more often, usually every two days. The grass-based dairies will move animals after every milking, (every 12 hours). With sheep and goats, the use of portable fence may be preferred for the final subdivisions for better management. Strip grazing works well with all species however you will need to use a back fence to control any over grazing of previously grazed pastures. The key to all of this is you, the producer, will make the management decision, not the animals, on where and how long they are grazing in an area!

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