

Paddock Layout

A management-intensive grazing system is a combination of permanent fence, temporary electric fence, a watering system, forage, animals and management.

A general guideline is to have as similar an area as possible enclosed in one paddock. Hydrology, aspect, soil type, and vegetation type are highly variable, depending upon topography. For example, the ridge top will be fairly dry, which means it will be drought-prone in the middle of the summer. In addition, the ridge top will be dry and early growing in the early spring. The soil in this area will accept cattle earlier, without danger of pugging, than a nearby swale.

The south-facing slope will tend to be hotter even than the ridge top, which allows it to green up earlier in the spring and to stay green longer in the fall. The north-facing slope will be cooler and moister. It will tend to have a deeper soil and it will be slower to green up in the spring than the south-facing slope. It will stay green during a drought, because of the cooler, moister conditions. Because it receives less direct sunlight, the north-facing slope generally grows less forage volume than a south slope, but it will grow it during those critical, dry summer months when the south slopes may burn up.

The valley or swale has its own characteristics. It tends to be moister than the north slope, which is beneficial in the middle of the summer, but it can be devastating during the "mud" season. It tends to have the deepest soil, because it collects the sloughing from the hillsides.

If we graze a south-facing slope, a north-facing slope, a ridge top, and a valley all in the same paddock, this mismatching will reduce the efficiency of the grazing program. For example, if we put livestock in during a drought when the north-facing slope is ready to graze, it is quite possible that the south slope is baked brown and has not regrown. Overgrazing will probably occur. Another scenario could be, if we turn in livestock when the south slope first greens up in the spring, they will spend time in the valley where the grass is dormant and the soil is still cold and wet from the winter. Pugging will damage the forage.

The area at the bottom of a hill is often damp. Water ducts out from the hillside and eases into the valley at that point. If a fence is placed above this area, livestock will walk in this wet area. The fence needs to be below this area so that its advantage can be utilized without damaging the seep.

A grazier needs to know the conditions of the land. One needs to know the locations of the wet areas, where warm air flows, where cold air flows, where the dry areas are, and the type of vegetation in the different areas.

The land, which has assets and liabilities, is the foundation of the grazing activity. Too often we force square paddocks and inappropriate grazing systems. Whenever we

force something on the land, we either have to use capital-intensive mechanisms to maintain production, or we reduce conversion of solar energy and take the loss.

For example, deciduous trees are 50 percent more efficient at converting solar energy into biomass than are forages. In many areas, north slopes should be left in trees and south facing slopes planted to forage. The southern aspect tends to be drier, which is not conducive to good tree growth, and the northern aspect gets more indirect sunlight, which is more efficiently captured by deciduous trees. North slopes grow premium quality hardwoods. The soil is deeper; the ground is softer and moister; the trees are shade tolerant.

Eastern aspects are very much like north aspects; western ones are like southern ones. The morning sun is never as hot as the afternoon sun.

If we do not match the grazing to the land, we are operating a half throttle instead of full throttle. We need to fully capitalize on the assets of the land and keep control of the expenses. Managing solar energy will help to accomplish this.

Straight fences are not found in nature. Placing permanent fences on the keylines will not necessarily guarantee that we always will match the grazing to the land, but it will go a long way toward reducing abuse. The keyline is the point where a ridge breaks over to hillside and the hillside breaks to a gentle valley or terrace.

Animals tend to walk on the contour, not up and down. While keylines and contour lines are not the same, they are similar enough to capture this tendency of animals. The animals benefit; the land benefits; and the bank account benefits, when we place the permanent fences on the keyline.

Put in very little permanent fence at first. Use temporary as much as possible. Fences that do not get moved within three years should seriously be considered to be converted to permanent fences in the near future. They have proven that they work correctly.

As fences are made permanent, look at the length of the temporary fences. They should not be longer than 300 yards. Fences that require a length longer than this require more consideration. A lane probably should be put into the design. The reason is twofold. First, the fence is too long to be efficiently set up and taken down routinely. The paddock "slice" will probably be too thin, which results in long, narrow paddocks. The more square the paddock, the more efficiently and evenly the livestock will graze. Secondly, the lane allows more grazing flexibility. Portable electric fences manage the "four-legged" harvesting machine.

Laying out a paddock system includes both permanent and temporary fencing. Paddock layout needs to follow the variances in the land and be highly flexible. Customize a design that individualizes the characteristics of your farm. This design will insure efficiency and function for many years to come.