

## Grazing for Pasture Health

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### Grazing Rules of Thumb

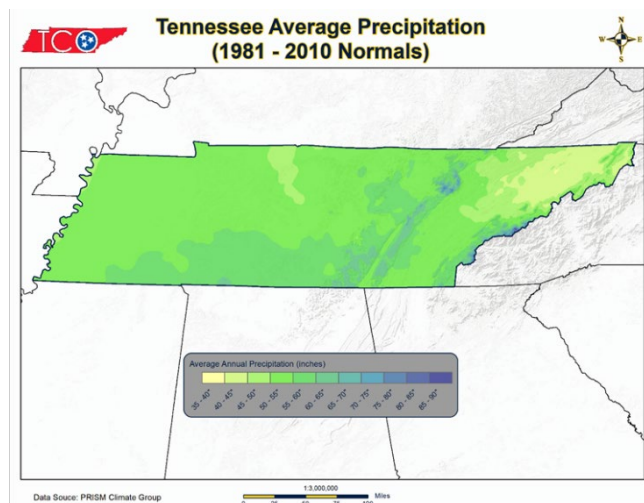
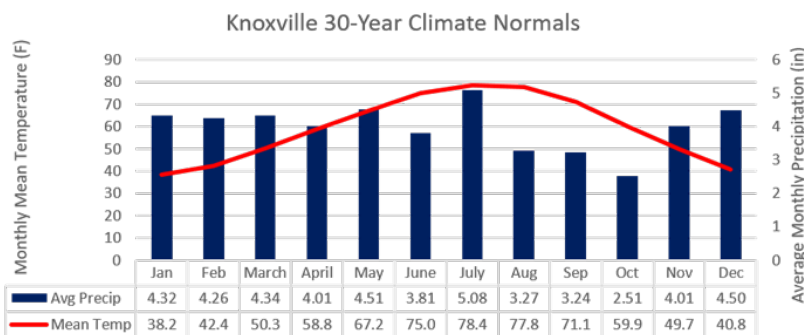
#### #1 Manage Stocking Rate at or below Carrying Capacity

**Stocking Rate** is forage demand or what is needed right now!!! Animals need 2-3% of their body weight after weaning. An example would be:

We have 30 head of momma cows at 1100 pounds each. Each momma needs around 33 pounds of food a day. Therefore, 30 head x 33 pounds = 990 pounds of grass per day. If we use Tennessee's stocking rate, we should run a cow-calf pair on 2 acres. So then, 30 cows need to be on 60 acres.

But, we need to start considering Carrying Capacity. **Carrying Capacity** is the forage supply at a given time. In other words, it is the grass available at this time (day, month, year). We also need to recognize this changes as the seasons change. Carrying capacity takes the weather into account.

Weather is the number one factor in growing grass. Below are two charts that show average rainfall and temperatures in the greater Knoxville, TN area over a 30-year period. These charts indicate upper East TN receives less rainfall than the rest of the state.



Where you would run 30 head on 60 acres, maybe you should run 27 head on 60 acres giving the grass less chance to be overgrazed. Once a field has been overgrazed it takes 2 years to fully recover from that event. Also, some years with great rainfall/growth you can use the extra grass to grow out your calf crop to gain more profits per head.

Example: With extra grass, taking a weaned calf to 900 pounds. A farmer then not only gets the price for a wean calf but receives the extra dollars for a stocker calf. Basically, the producer is getting paid twice for 1 calf.

## #2 Make Proper Use of Existing Forages

### Part 1 Managing the Grass

Keep grass in the growing curve of it's life cycle. This promotes higher quality feed, good root health and quicker regrowth.

Producers need to **Encourage Fescue to Tiller**. Fescue

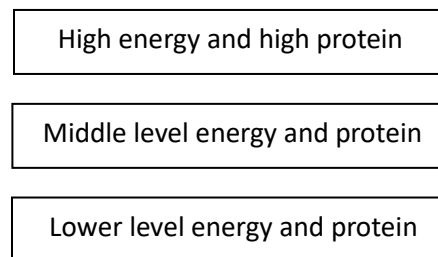
reproduces by seed or rhizomes but mostly spreads by tillers. Tillers are offshoots from the mature plant that replace the mature shoot once it dies. A fescue shoot life span is less than a year. Tillers which form in the fall, survive the winter and are used for spring growth. These may die in the summer. Spring forming tillers survive the summer and may die late winter. To encourage tillering a producer needs to do the following:

Spring	Summer
Take the top 1/3 then move the animals	Take half the plant and leave half the plant

The reason to encourage tillers is to promote a good stand of grass. Below is a chart which indicates the amount of feed an animal can get off a good stand of grass vs a poor stand.

Stand Quality	Pounds of Feed
Good	300 lbs/inch
Thin	100 lbs/inch

The height of the fescue is directly related to the energy and protein level of the feed quality. This is only true before the seed head shows. After seed head formation the quality then reduces rapidly.

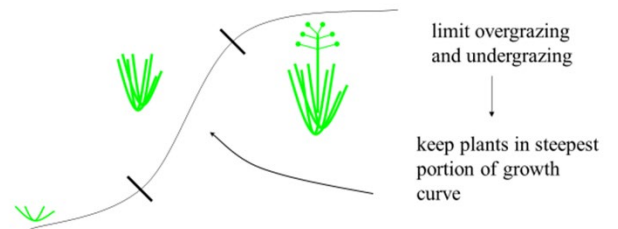


Part 2 of rule #2 is only supplement when needed. Fill the forage gaps for quantity and quality cost effectively. Examples would be: Buying hay, stockpiling fescue, or using annuals. One must weigh the cost vs the benefits of each.



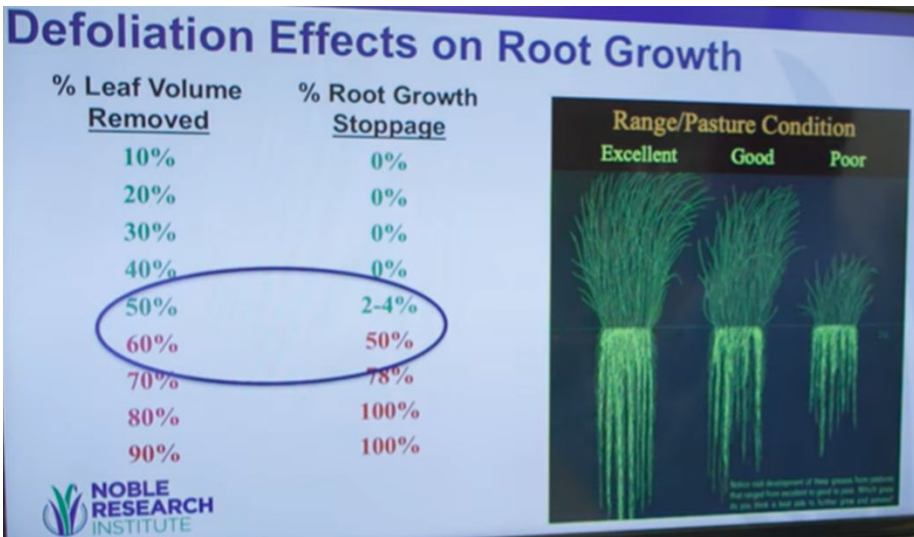
## #3 Plan and Graze Adaptively

## MANAGING THE FORAGE CURVE



Adaptively just means a way that involves changing to suit changing conditions. There are four long-term goals for planning and grazing adaptively; improve Pasture Health, Pasture Vigor, Resiliency of Stand and Soil Health.

It is important to understand the effects of grazing or cutting hay on our grasses.



This chart indicates that after grazing half of the above ground plant, 50% of the root system quits working. As more is grazed, more of the root system is stopped. Without the root system working the above ground plant will not respond quickly to regrow.

Therefore, a great rule would be "Take half and leave half!"

Another part of adaptive grazing is to understand **Rest vs Recovery**.

Rest is equal to time or days that animals have not been grazing the stand. It doesn't speak to the health of the stand of grass.

**Recovery** is all about plant health. Recovery asked the question, "Is the plant fully recovered from a grazing event?" Recovery equals health. When a plant is fully recovered then and only then is it healthy and ready to graze again without loss of health of plant or root system.

Fescue and other cool season grasses need 30 days of active growing conditions to fully recover. They need 45-60 days if conditions are moderate. They need 90 to 120 days if growing conditions are poor.

Let's consider how paddock size effects rest and recovery. By looking at the chart to the right, the following comments are produced. If producers have animals running continually on a piece of ground, then there are no rest days and certainly no recovery period. If we have 2 paddocks then half the field is resting half the time, but is the growing conditions good for recovery? If there are 4 paddocks then each paddock is resting 75% of the time. The more rest given will allow for a better chance of recovery.

# paddocks	Days Graze	Days Rested	% of time rested
1	365	0	0
2	183	182	50
4	91	275	75
8	45	320	88
16	23	342	94
32	11	354	97

\*Assuming all paddocks are of equal grazing capacity



A great ending analogy would be:

These cowboys may need rest, but they would prefer a full recovery before they ride again. The same is true for grasses.

