

# Foraging Around



By Dr. John E. Baylor

Director of Market Development  
Beachley-Hardy Seed Company

nutrients. And, finally, let's assume you have or are prepared to handle any insect and weed pressures that may be present in your area. Removing these stresses does, of course, make intensive cutting management, four or more cuts per year, more realistic without fear of losing your stand. So don't ignore these key management principles!

### Where Growth Originates

As you check your alfalfa fields this month you'll note that most of the spring growth comes from crown buds that were formed last fall. Some of those crown buds did, however, develop early this spring before initiation of any new growth. Obviously, then, the ability of these plants to produce a big first cutting this year starts with the health of the plants last fall, and the number of buds formed at that time. A sound management program last fall, adequate levels of fertility and plenty of food reserves in the roots are all factors leading to healthy plants.

### About Alfalfa Leaves

Now let's turn our attention to alfalfa leaves. Leaves, of course, are vital to the growth and quality of the crop. They have higher concentrations of crude protein, total digestible nutrients, fat, ash, total nonstructural carbohydrates and minerals than stems. And the digestibility and crude protein concentration of leaves decline more slowly with increased maturity than that of stems. Why?

Because as the plants mature the fiber constituents of the stem increase rapidly, experts tell us.

Leaves make up a greater portion of the total yield for early cut alfalfa. For example, the leaf-to-stem ratio of healthy alfalfa at early flowering is about 50-50. By late bloom only 40 percent of the total yield is leaves. This is especially true for first cutting.

Leaf loss, therefore, along with maturity, has a major effect on quality. And after early flowering, loss of lower leaves can occur rapidly as a result of shading, aging and leaf diseases.

### What About Cutting Height?

Normally for alfalfa we haven't worried too much about cutting height as long as crown buds are not damaged. And, of course, you normally get higher total yields with short stubble if the plants are healthy.

But we also know that cutting height can influence yield and survival of alfalfa where root reserves are low due to frequent cutting. Leaving a tall stubble permits a greater leaf area that provides additional energy for the initial growth after cutting. Furthermore, with frequent cuttings, where fewer crown buds exist, a taller stubble provides more sites for axillary bud development.

All in all if your stand is healthy, except for the last cut this fall, a cutting height of about 2 inches should be okay. But if your stand is weak for any reason, raising the cutter bar another inch or two could be beneficial.

### Putting It Together

So far we've taken a brief look at the alfalfa plant itself. Now let's sum up in terms of managing your first cutting this year.

As indicated previously, crown buds are the origin of growth for the first crop this year. Regrowth, however, occurs from either crown buds or axillary buds on stems. If your first harvest is delayed, new growth will occur from these crown buds. And because of the frequent association between crown bud development, alfalfa maturity, and root reserves, some growers have suggested that shoot elongation is a good indicator that the crop is ready to cut. And it may be helpful. But in this area where winter-dormant varieties are grown, crown bud development is not better indicator than stage of growth, and probably not as good. Why? Because while it's true that certain weather conditions may affect floral bud development these same factors also influence new shoot elongation.

Thus, everything considered, stage of growth is still your best guide to know when to cut. And for first harvest of established stands, the best time to cut is when the majority of the plants reach full bud or are just showing a sprinkle of flowers.

And, since getting that first cutting off and into storage fast and at the peak of quality is so important in terms of your later harvests, it's good to have your strategy planned for handling that first crop. During the past several years top growers in the Pennsylvania Alfalfa Growers Program solved that problem by storing the first cutting as wilted or low moisture hay crop silage.

It's May! Mowers, hay conditioners and forage harvestors are all tuned up. And alfalfa growers throughout the region are geared up to move in for that first big harvest of '86.

We all know that timing of that first harvest is very important. But yield and nutritive quality are, of course, very much a function of when you harvest. But when you make that first cutting, and how you handle it, also pretty much determines the total number of harvests you'll make this year. And it may influence the recovery of any stands that have been damaged during winter.

In this week's column I'd like to

take a look with you at some of the things we know about how alfalfa grows and develops - and how this growth and development are affected by your cutting management this spring.

### To Begin

At this point let's assume you are already growing an adapted variety or varieties such as WL 316 or WL 320 with multiple pest resistance, i.e. moderate to high resistance to the major diseases attacking alfalfa in your area. Let's also assume you're maintaining a sound fertility program for alfalfa - pH 6.7 or above - and adequate levels of phosphate, potash and the other essential



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