

## 'It depends' is best answer to question on hay timing

COLUMBIA, Mo. — Timing of hay harvest is a matter of trade-offs.

So Howell Wheaton, who prides himself in giving straight from-the-shoulder advice, always feels a bit uncomfortable when farmers ask him when they should cut hay.

"It's always a compromise between quality, quantity, lifestand and plant vigor," said the University of Missouri-Columbia Extension forage specialist.

"I can tell you what we recommend under ideal conditions—when plants are not under stress."

O.K., Howell, let's start there.

"Under these conditions, alfalfa should be cut in the bud to 1/10 bloom stage; red clover, 1/4 to 1/2 bloom; timothy, late boot; bromegrass, heads emerged; orchardgrass, past bloom; reed canarygrass, heads emerged; and tall fescue, boot stage."

But?

"But conditions are seldom ideal and the weatherman seldom cooperates. Besides, farmers' schedules are such as they can't get every acre harvested when they should," Wheaton said.

"All I can tell them is what happens as legumes and grasses grow, so they can make management decisions that suit their particular situation."

O.K., Howell, let's do it.

"First, some general information. Maturity of topgrowth is associated with storage of organic reserve materials in the roots and crowns. These are usually referred to as total available carbohydrates (TAC), and their major components are starch, sucrose, and reducing sugars.

"And it's the level of these carbohydrates in relation to the plant's environment that should determine when forages should be harvested."

Wheaton said the TAC content of alfalfa roots decreases as spring growth begins. When the tops produce more food than used for growth, TAC begins accumulating in the root and reaches a high level at near full bloom.

"Because digestibility and crude protein become lower and crude fiber increases as the alfalfa plant approaches full bloom, farmers

have to compromise on when to harvest," Wheaton said.

"Under conditions of stress, it's best not to harvest a crop before the 1/10 to 1/2 bloom stage to avoid injury to the plant.

"Management of stands suffering from severe winter injury usually requires delaying the first harvest until it has reached the 1/2 to full bloom stage."

If farmers cut alfalfa too early, the stand won't last long. UMC research shows that alfalfa cannot be cut in the prebud stage and harvested every 35 to 45 days

without damage to the alfalfa stand.

Not all legumes follow the same seasonal patterns as alfalfa, said Wheaton. For example, cutting height of birdsfoot trefoil is much more critical. Trefoil should not be cut or grazed so low during the summer as to remove all the leaves.

"Red clover has a TAC cycle similar to alfalfa but differs in two major aspects. It should not be harvested until it reaches 1/4 to 1/2 bloom. It should not be allowed to

go into full bloom during the early fall of the seedling year.

"Blooming causes a physiological change in the plant which makes it less winter hardy."

In the case of grasses, reserves and their role in regrowth is not as important as it is with legumes.

"The major management factor affecting rapidity of regrowth, vigor and standlife of grasses is height of cutting," said Wheaton.

"For best results, minimum of a 4-inch stubble should be left with the tall grasses and two inches for the short growing species."

## Tree farms observe birthdays

COLLEGE PARK, Md. — This is an anniversary year for certified tree farms, both nationally and in Maryland. The American Tree Farm System is 40 years old this month, while tree farming in the Old Line State has now reached its thirty-fifth birthday.

In honor of the occasion, Governor Harold R. Hughes proclaimed last week as Tree Farm Week in Maryland.

Maryland's first certified tree farm was a 200-acre tract established in 1946 near Welcome (Charles county). It is owned by the Galtfelter Pulp Wood Company of Spring Grove, Pa.

The state's first tree farm is now part of 54,830 acres of certified woodland acreage owned by Glatfelter and another large forest firm in southern Maryland and on the lower Eastern Shore.

In addition to these large holdings, there are 339 private woodland owners with 63,358 acres of certified tree farm acreage in

the state reports John F. Kundt, Extension forestry specialist and associate professor of horticulture at the University of Maryland. Every Maryland county has at least one certified tree farm.

The state's certified tree farm numbers range from one each in Howard and Montgomery counties to 36 in Dorchester county and 39 in Garrett county. Carroll county has 19, while Allegany and Washington counties each have 18.

More than 41,000 private landowners in the United States manage 83 million acres under the American Tree Farm System; the numbers are increased steadily both at the national and state levels, says Kundt. He notes that at least 100 certified tree farms have been added to the Maryland list in the last seven years.

There is no direct financial incentive to qualify as a certified tree farmer, Kundt points out. Instead, the program is intended as recognition for private owners,

with 10 acres or more of woodland, who manage their forest property in accordance with stipulated conservation and business management guidelines.

Certified tree farms are re-inspected at least once every five years to make sure that the woodlands are still being developed properly. If not, they are dropped from the roster.

While forest industries are active supporters, the focus of the tree farm program these days is on privately owned non-industrial woodlands.

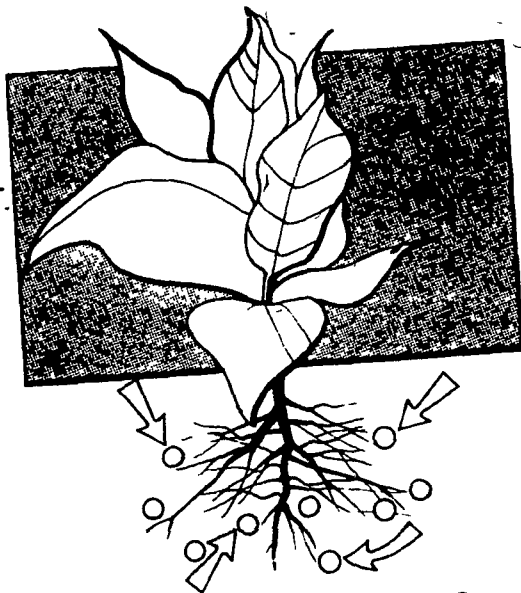
According to Kundt, these privately owned lands hold the key to a long-range increase of forest productivity needed to meet a projected doubling of domestic demand for wood and paper products in the next 50 years.

Tree farms are located in every state, although nearly 60 percent are found in the 13 southern states, including Maryland. Tree Farmers of the Year are selected at the state, regional and national levels. Maryland's winner for 1981 is Clarence W. Strickland, 94, of Snow Hill (Worcester county).



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