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THE COON CREEK EXPERIMENT

an innovative approach to tree farming

Smack in the middle of a thriving 160-acre grain farm in Marengo, Ill., stand 1500 fine specimen trees. The trees, honey locust, emerald queen maple, Rosehill ash, Greenspire Linden and sovereign pin oak, are at a sturdy three to three and a half inches in diameter, but they aren't for sale.

"We're letting them grow another year or so to add an inch to inch and a half to their diameters and a whopping 100 percent to their value," smiles John Banghart, the innovative owner of the property and originator of the farm within a farm concept.

John's brainchild began a little over three years ago when he, businessman Glenn Adams and Glenn's son, Jeff, were looking for a profitable way to provide young Jeff with a constructive learning experience in the nursery business.

"At that time I had just sold my sod farm business and was planning to concentrate on developing my Marengo property," recalls John. "I realized I had available property and equipment, Glenn would invest the necessary capital if there were a sound business proposal, and young Jeff would provide the labor. All we were really missing was an experienced nurseryman." It was then they convinced 20-year veteran nurseryman Carl Wilson to be the fourth partner. The four had no trouble agreeing on a project. It would be a tree farm. But insuring a profit took a little more ingenuity.

"We knew there was a growing market for larger trees that just wasn't being supplied," says John. Landscape contractors on bigger jobs — institutions, golf courses, schools, parks — want larger trees immediately. They don't want to have to wait a couple of years while they grow." So the project was finalized. Coon Creek trees would only be sold when they reached four to five inches in diameter.

In early spring of 1973, under Carl's supervision, Coon Creek purchased 1500 ¾-inch diameter branch liners for a capital investment of $20,000. In April they were pruned then planted with the help of an 18-inch auger. The trees were planted 12 feet apart in rows of 50 with the rows 15 feet apart. "We needed the space for harvesting," explains John. It will be done under Carl's direction by hand with the help of a trencher. This means each tree will need a five foot square dug around it."

Honey locust, emerald queen maple, Rosehill ash, Greenspire Linden and sovereign pin oak grace ten acres of the 160-acre farm.

Each September the trees are fertilized with a 6-24-24 low nitrogen mix. "We're careful not to over fertilize because we don't want to force growth. This causes bark splitting," John explains. In late February they are sprayed with a dormant oil, and in June with a foliar spray. Trimming is done as needed back to the lateral branches and the trees are continuously straightened.

If harvested at two to three inches, according to John, the $20,000 original investment would gross $112,500 or $75 a tree. If harvested at four to five inches in diameter, he says, the gross will be in excess of $225,000.

Why is such a simple idea as letting the trees grow an extra year or two to double the profit so in-

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THE COON CREEK EXPERIMENT

novative? "Because," says John, "most people just aren't set up to go five to six years without any income. Your land is tied up, you must have use of and maintain your equipment and labor is usually a factor." Nevertheless, John believes many more people in similar circumstances could adopt the Coon Creek concept and make a considerable profit.

John calls the Coon Creek experiment Phase I. Phase II, the planting of 20 acres on a nearby farm, has begun with 500 specimen branch liners already in place. Jeff is the only Coon Creek partner in the new enterprise.

Although young Jeff is only in his third semester of his nursery education, it appears he's headed for a magna cum laude degree in tree farming, and Carl, Glenn and John are headed straight for the bank.□

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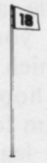
- ☐  Standard Flags & Poles
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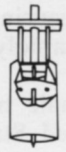
- ☐  Standard Hole Cutters

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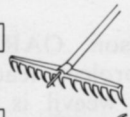
- ☐  Standard Rakes
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From the Campus

OARDC declares all-out war on woody ornamental pest

A serious insect pest of woody ornamental plants throughout Ohio has become the object of an intensive study by entomologists at the Ohio Agricultural Research and Development Center.

Dr. D. G. Nielson, OARDC entomologist and project leader, says the black vine weevil is the number one nursery insect pest, particularly along Lake Erie. As yet no adequate control program has been developed to alleviate the problem.

The pest is also a major problem in nurseries and homeowners' yards in Rhode Island, Pennsylvania, New York, and Connecticut. The insect's two most important hosts in these states and Ohio are taxus and rhododendron. It will also attack other ornamentals as well as small fruit crops.

A major effort against the black vine weevil has developed in Ohio as a result of a $33,000 grant from the Lake County Nurserymen's Association. One Lake County Nurseryman lost 2,000 rhododendron valued at $10,000 due to the weevil.

Nielsen says the larval (grub) stage of the insect does the most damage by feeding on the roots of the host plant. The larvae thrive in light sandy soils, hence their large concentration along Ohio's Lake Erie nursery belt. The entomologist adds that if the foliage of rhododendron or taxus suddenly turns yellow, it is a good bet that grubs are attacking the roots. The adult weevils will eat foliage, but this damage is secondary to root damage by the larvae.

Nielsen and assistant Mike Dunlap have already discovered that a small percentage of adults overwinter. These adults start maturation feeding in early April and begin laying eggs before many nurserymen even think of spraying with recommended insecticides.

Actually, few insecticides perform effectively against the larvae. Nielson says the larvae are apparently able to resist most insecticides tried so far. He adds that the ideal pesticide would be a soil-applied one which would provide a chemical barrier between the young larvae and the roots on which they feed. Nielson and Dunlap hope to develop a larvicide program for nurserymen after they have learned more about the larvae's response to light, gravity and other stimuli.

There are a number of unique features about black vine weevil adults. For one thing, even though they have one pair of wings, they are flightless. This means that their movement from one place to another is limited, causing population levels to build rapidly in a specific area.

There are no male black vine weevils in the United States. This condition, known as parthenogenesis means that the weevil's eggs hatch without being fertilized. Nielsen has been told that males exist in Europe and is interested in controlling black vine weevil by using pheromones with the help of imported males. Pheromones are sex attractants produced by an insect. They have been used to help to control some pests naturally.

Nielsen will be travelling to Europe this summer to investigate the pheromone possibility. Much research has been done in Europe because of extensive damage to grapes and strawberries caused by black vine weevils.

Research efforts in this area have most recently been boosted by a $40,000 grant from the United States Department of Agriculture. According to Nielsen, the current undertaking is the most intensive venture against the black vine weevil in the United States. If effective control measures are to be found, they will probably be found in the next three years, he concludes. □

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TURF LITTER SUPPRESSES DISEASE

by Robert L. Haney

Did you know turfgrass litter that builds up on the soil surface supports thousands of different kinds of microorganisms which decompose the litter and suppress turf diseases?

According to Dr. Phil Colbaugh, plant pathologist with the Texas Agricultural Experiment Station at Dallas, turfgrasses have a unique microbiological defense system which protects against many diseases attacking them.

Most diseases of turfgrasses are caused by fungal pathogens which feed on both living and dead plants. Fungi which cause Fusarium blight, leafspot, brown patch and Pythium blight are common examples. This group of fungal pathogens largely relies on turf litter for survival when it is too cold, hot, wet or dry for rapid growth. The litter is also used in the production of spores or fungus threads by which the diseases spread.

The accumulated litter which surrounds the turfgrass plant consists of grass clippings, dead or dying lower leaves, stolens, rhizomes, roots and tillers which are in various stages of decomposition.

Microorganisms which decompose litter not only compete with fungal pathogens for available food, but also produce compounds which suppress the growth of pathogens. Litter decomposition is mostly done by bacteria; however, many beneficial fungi are also present in litter, especially during advanced stages of decomposition.

Colbaugh cautions against excessive buildup of grass clippings. Research has shown that turfgrass clippings which are added to the litter during mowing greatly favor disease increase.

He explains that at the time of mowing, turfgrass clippings have a high content of available nutrients and low numbers of beneficial microorganisms needed to suppress fungal pathogens. Collection of turf clippings during the growing season prevents excessive buildup of litter which favors disease.

Temperature, moisture and a continuous supply of available nutrients are important factors which regulate disease development on turfgrass and suppress litter microorganisms. There are many examples of turfgrass disease which are started during periods of environmental extreme, or when too much or too little fertilizer is applied.

For example, summer disease problems are common on closely clipped turf, or where temporary drought conditions allow turf litter to dry. Colbaugh's research has shown that the activities of litter microorganisms are greatly reduced without moisture. But, several turf pathogens grow readily on dried litter immediately after remoistening.

Colbaugh considers drying and rewetting of litter to be a major factor favoring disease activity on turf during the summer. Turfgrass also becomes increasingly susceptible to disease when under water stress. Drought aids the development and spread of disease on turf.

Research shows that proper irrigation is necessary to maintain an active microdefense system on litter and a vigorous stand of turf during the summer. Keeping turfgrass litter moist allows continuous activity of beneficial litter microorganisms. This doesn't mean that turfgrass should be kept sopping wet, as this would favor certain fungal pathogens. A well developed turf cover will maintain litter in a moist condition for a long period while a thin cover will lose moisture quickly.

Increasing the mowing height of turf during the summer months helps conserve moisture in litter, Colbaugh's research shows. The frequency and amount of water applied to a lawn should be based on the existing structure of the turf canopy. For a lawn with a dense canopy, once-a-week deep watering may be sufficient to keep both the soil and litter moist. For a lawn that is thinned out, several short morning waterings may be necessary in addition to the weekly deep watering to keep both the litter and the soil moist.

The timing of watering of turf can help reduce disease activity, according to Colbaugh. The practice of early morning watering allows the turf foliage to dry quickly. Watering of turf during the evening or at night usually keeps the foliage moist for long periods and creates a very favorable environment for disease activity by turfgrass pathogens.

Cultural practices designed to keep litter-decomposing microorganisms vigorous, have proven helpful in the suppression of many fungal pathogens on turf. Future research will look for additional triggers of fungal pathogens on turfgrasses. These studies will enable plant scientists to propose other cultural practices for turfgrass based upon an understanding of how common turf diseases can be naturally suppressed. □

Robert L. Haney is a science writer for the Texas Agricultural Experiment Station.

Tim Shallcross Jr. switched.

Tim Shallcross, Jr., of Green Lawn, Inc., in Louisville, Kentucky, uses Lescosan (Betasan*) for pre-emergence crabgrass control in his lawn spray business because Lescosan gives full season control of crabgrass. As Tim puts it, "When you're operating in the crabgrass belt, you need all the longevity you can get."

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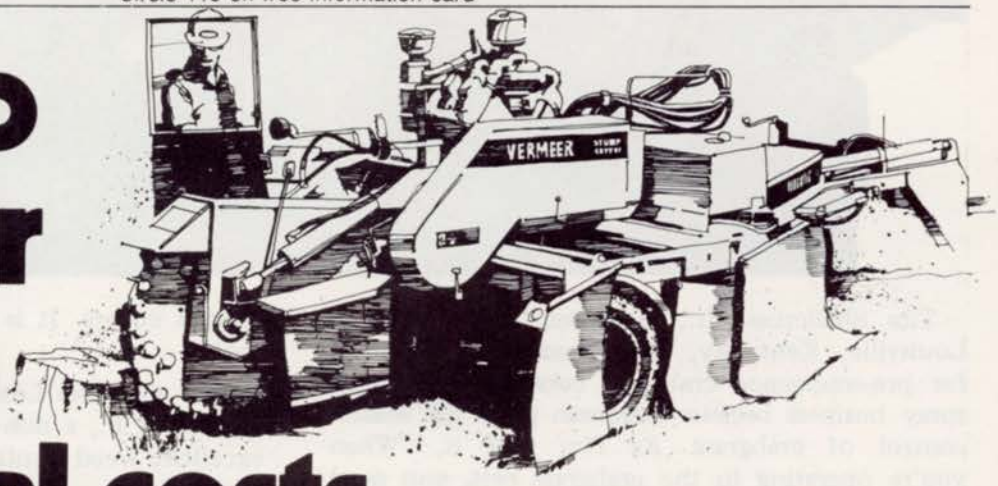

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