aerated but dry soil (like most of our sandy soils). Water will move through (percolate) too rapidly and very little will be retained to grow turf. An excessive proportion of fine pores, on the other hand, will exclude air and may be water-logged (like heavy clay soils.

Thus, once we have determined our given soil situation, and knowing the physical requirements of our turf facility (percolation rates, drainage, etc.), we can then amend the soil to meet our requirements. A great variety of soil materials are available to do this including calcined clay, vermiculite, peat, colloidal phosphate, sand, etc.

If we are fortunate enough to take over the turf facility prior to planting, we have a golden opportunity to shape our future soil condition. If we inherit an established facility, the job is more difficult, expensive and time consuming. It can be done gradually, however, by periodically working proper amendments into the soil as topdressings following soil aeration.

The proper proportion of amendments can be determined by a soil testing procedure known as "mechanical analysis". Many soil testing laboratories and industrial firms can provide these tests, and will help you compound or construct a soil to meet your needs based on such factors as percolation rates, etc.

Once you have amended your soil to a proper physical

condition, then the previously mentioned secondary symptoms such as compaction, weeds, restricted roots, etc., will be minimized. Then turf maintenance will be a more enjoyable and successful business.

Credit: THE FLORIDA GREEN, Spring 1988



EDITOR'S CORNER

BRAD KLEIN, CGCS

The golf season is soon to be replaced by the snowblower season and with that we'll experience some joy and some regrets.

Regrets that our families had to enjoy the hot weather without us. Regrets that turf was lost and replaced by weeds. Regrets that some memberships didn't fully comprehend the problems we experienced and regrets that we didn't accomplish all our goals set for the past season.

It may be hard to find any joy but hopefully you've be-



Kubota's mid-sized tractors are very versatile. You'll find them at work on farms, in parks,

nurseries, estate homes and even on construction sites. The reason is simple. Our L-Series tractors come with features you'd expect to find only on bigger, heavier machines. For example, 3-, 4-, or 5-cylinder diesel engines with PTO horsepower from 21 to 40. Other features you can select include 8x7 or 8x8 mechanical or hydraulic



shuttle-shift. A choice of 2- or 4-wheel drive on most models. A hefty 3-point hitch. And more. So if you're looking for a tractor that can get the job done, whatever it is, you've found it. The Kubota L-Series.





1300 West Highway 13 Burnsville, MN 55337 612/894-5727 come reacquainted with your family. You're prepared to kill the weeds and grow new improved turf varieties next season. The membership realized it wasn't greener on the other side of the fence and now want that new irrigation system you've been dreaming about. I'm sure some joy will come from the friendship that will be made with our DNR officials in the future. This past season is almost history and that fact alone is a joy.

The association had a very successful year in regard to our turf research funding and promises to be a benefit to all. The success of not just the research projects but every aspect of the association is dependent upon participation by its membership whether it's serving on the board or committees or just attending the monthly meetings.

One of our bylaw changes for this year's election is to allow career assistants classified BII with five years in that classification to be changed to Class B. This will allow them the privilege of voting and increase participation even more.

The annual conference is soon approaching, November 30 through December 2 at the Sheraton Inn Northwest, with a great slate of speakers on hand. Once again we'll have a casino night so dust off the cards and dice and get prepared for a great time.

The wind blew but that didn't detract from the nice time we had at Rolling Green Country Club. Rick Fredericksen had his leaf blowers out in force and the course was superb. The clubhouse crew presented about the best lunch ever and I think high scores could only be blamed on too full of stomachs.



"You didn't lose it in the sun . . . you lost it in the pond."

PESTICIDES AND PROTICTIVE CLOTHING

by MARJORIE A. SOHN, Associate Professor University of Illinois at Urbana-Champaign

Exposing your skin to some pesticides presents a health hazard and clothing provides a vital protective barrier against exposure.

Pesticide applicators can purchase chemical-resistant apparel, but recent surveys indicate the majority of pesticide users wear traditional work clothing when mixing, handling, and applying pesticides. They prefer ordinary work clothing because it is more comfortable, less expensive and easily available. They also doubt the need for protective clothing.

A non-punchtured-type Tyvek is one of the disposable chemical-resistant garments on the market. It is made from spunbonded olefin, a non-woven fabric that provides an effective barrier to many types of chemicals. Although you usually must dispose of non-woven garments after one use, Tyvek garments withstand up to four launderings. However, if your clothing is contaminated with a concentrated chemical, dispose of it rather than trying to clean it because of safety considerations.

Fabric Studies

Testing is under way on Gore-Tex fabric to determine its ability to provide protection from pesticides. Gore-Tex is a microporous membrane that is laminated between a shell fabric and a fabric lining. As a result, Gore-Tex allows perspiration to pass through the fabric, but it keeps liquid from entering the outside of the garment and contacting the skin.

A North Central Region research project focused on the influence of the following characteristics in creating a protective barrier:

- Fiber content,
- Fabric construction,
- Functional finishes, and
- Laundering methods.

Choosing Clothing

Absorbency and wicking are important considerations in determining chemical resistance. Tests conducted on cotton, polyester/cotton blends, polyester, nylon, acrylic and spunbonded olefin fabrics yielded these results:

- Pure cotton fabric exhibits the highest rate of absorbency, which means it absorbs a large amount of pesticide solution. However, less pesticide solution travels to under-clothing or skin.