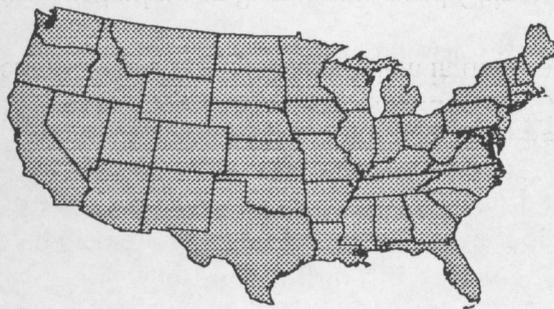


TurfComms

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PURPOSE: To pass on what we learn willingly and happily to others in the profession so as to improve turf conditions around the country.

GREEN INDUSTRY CONF. AND EXPO continued: TREES: Carl Whitcomb, Ph.D., author of Know It and Grow It, gave two talks both were on the planting of trees. I'll give the highlights here: (1) **Green ash** is very tolerant to low oxygen levels in soil due to standing water or compaction. (2) **Pines and oaks** demand well drained soils. (3) For the first 10 to 15 years after bulldozers get done scraping, clearing and regrading a piece of land trash trees are going to work best. (4) **Redbuds** like mature loose soils with a fair amount of organic matter. (5) **Dogwoods** need mulching and can't stand bermudagrass competition. (6) Anything that reduces the energy out put of the leaves will first show up as a problem in the roots.

(7) **Tree lilacs** (Japanese, *Syringa reticulata* or *S. amurensis* and Chinese or Pekin, *S. pekinensis*) are great in open areas in hardiness zones 4, 5, and 6. Their fragrant June flowers are greatly appreciated at that time of year. These trees are very sensitive to photoperiod and thus don't do well in the South where the days never get very long. Dr. Cappiello's Bulletin mentioned in the last issue of Turfcomms notes that both of these two species and 16 other species in this genus survived at his zone 4a site in Maine. The non-survivor was *S. potanini*.

(8) The **osage orange** is a tough plant for use in zones 5 through 8, very tolerant of wind and ice storms. The cultivar 'Park' is a male that is thorny only when young. To avoid the fruit grow only males. (9) Where the seed originate for any species is critical to the trees survival. This is

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especially true for cold and heat stress as well as extremes of soil pH and salts. (10) He feels the **sawtooth oak**, native of China is a great tree for zones 4, 5, and 6 with fair to good tolerance of alkali soils. It is a big acorn producer. It has a dark green shiny leaf with yellow-orange fall color. (11) **Shumard oak** is very tolerant of alkaline soils. This oak looks like a pin oak except its acorns are up to four times bigger and its lower branches go up at the end.

(12) **Post oak** as one of the most tolerant oaks of low fertility and clay soils. (13) For **iron chlorosis** problems he suggested drilling holes around the tree to 12 inches, put iron complexes in the bottom 6 inches and then 3 inches of granular sulfur on top. (14) Older trees are much more sensitive to stress than young trees. (Ed. I saw most of the old, mature trees at Lexington C.C., KY dying after three years of drought while newly planted trees were doing fine.) (15) He feels that the **sulfonylurea herbicides** even in very low dosages are very hard on pines. Oust™ is the only one that I would expect to be used in a turf/hort. setting.

Transplant shock - the older and larger the tree the longer it takes to get it over the shock. As to why tree roots fill up drain and sewer lines - air, water and nutrients. He also noted that just loosening the soil will greatly encourage tree roots. This is why it is strongly suggested that holes dug for trees be at least twice the diameter of the ball. If you must use a tree spade to move trees be sure to dig the hole you are going to put the tree in with a back-hoe.

He also notes and I have seen this, tree roots will expand greatly in any old trench site because the soil has been loosened. When planting a tree don't mix in pine bark or peat moss to amend the soil. In a private conversation he did admit that compost is the best thing to amend the soil with if you must. Putting this or the above two as mulches on the top works much better. For all trees **mulching** immediately after planting is one of the best things you can do. Two to four inches is preferred but hard to show damage from even greater amounts. **Phosphorus** is not as helpful in planting trees as loosening the soil around them.

He told of doing research with potted trees and shrubs to find out the affect of heat on the roots on the side of a pot. 15 minutes exposure of the outside of a pot to sunlight on a hot summer day is sufficient to kill all the roots on that side.

If calcium levels are high and magnesium is low or deficient trees may develop deficiency symptoms for which they will be very slow to recover from. When soil pHs are at or above 7.0 iron, zinc, manganese and copper deficiencies are common for many ornamentals.

New root growth on trees occurs when new buds start to swell in the spring. Thus it is very critical they be planted prior to this time. If moving trees in the summer consider striping all the leaves off and planting it quickly. This should force the tree to bud out and thus start new root growth. You will then need to be sure the tree properly hardens off for winter.

Next at the EXPO Frank Gouin, Ph.D., recently retired Horticulture Dept. Chairman, Univ. of Md., talked on **compost**. He started off talking about how to make compost and the money that can be saved by doing it, dumping fees. etc. For more on this see On-Farm Composting Handbook, Northeast Regional Agricultural Engineering Service Bulletin 54, this is a 186 page text on composting that is a good beginners text for golf course superintendents and landscapers.

He mentioned that anything organic could be composted from chickens and crab waste to PCPs and Dioxins. He noted that dry leaves and wood chips needed nitrogen source for satisfactory composting but only three things had he found that needed lime. They were pine needles, cranberry, and grape wastes. He noted that anything with a pH above 8 will not compost. **Ed. if you need help in your composting operation let's cover it in a turf advisory visit.** He also noted that some composts might have too many soluble salts for conifer trees but still be fine for deciduous trees. (Ed. be careful with composted mushroom soil)

Anyone looking for two good, down-to-earth speakers in horticulture Drs. Gouin and Whitcomb are excellent choices.

I talked to numerous horticulture product salesmen and picked up numerous pieces of literature. **Biobarrier** now has a new use and label. Biobarrier II™ is for vegetation control **under a two inch mulch**. It is suggested for around the base of trees, under guard rails and fences, in greenhouses, shrub beds, and under wood decks. Of course with a two inch mulch there is often not a great need for a preemerge weed control and a porous fabric. The Reemay people are giving a ten year warranty when used as directed which for those of in the maintenance business sounds like a great deal.

Another product I thought might be of interest for golf course tees (especially driving range tees) and athletic fields is the **artificial turf and natural turf combination** product called SportGrass™. This was **installed and planted** in the University of Utah's Rice Stadium in late May. A light topdressing of crumb rubber was also used at seeding time. The artificial turf portion of this SportGrass field is a very thin, but, tall (1 and 1/2 inches) artificial turf with a very porous mat. It was laid on 33,000 tons of sand and then topdressed to fill with sand to the top of the 1 and 1/2 inch artificial turf. It was then seeded to perennial ryegrass and Kentucky bluegrass. Thus the crown of the grasses are going to be protected by the artificial grass leaves and the turf is not going to be ripped out by 300 pound football players because of the buried mat holding the artificial turf in place.

On the other hand the football player is not going to have the very hard artificial turf on asphalt to land on or slide across. He is going to run and slide basically on a sand based field with mostly natural grass plants exposed to his sliding flesh. **Is this the best of both worlds?** Maybe.

Maintenance is going to have to be geared to keep thatch from accumulating and aerification with hollow tines is out. The use of 1/4 inch solid tines to one and 1/2 inches is feasible. Like a lot of new materials and ideas on the market encourage your neighbor to put it in and watch closely.

FUNGICIDE RATES: It is often not the rate of material that is the problem it is the amount of carrier you use that causes you to get poor control. Research and the industry are both beginning to tell you loud and clear **five gallons or more per thousand** square feet will often times give much better control than that one gallon per thousand many have been using of late. **Even for pythium.**

BENTGRASS FAIRWAYS: A doctorate dissertation published in August of 1992 has been sitting in my office since mid-1994. It is 227 pages long and perhaps it does not do it justice by printing the brief condensation you will see here. The title is **TRAFFIC AND CULTURAL PRACTICE INFLUENCES ON A FAIRWAY CREEPING BENTGRASS TURF**. It is by

Kyoung-Nam Kim, who was from South Korea and studying under Dr. Horst and Shearman, of the Univ. of Nebraska.

Dr. Kim looked at daily vs. biweekly irrigation, clipping return vs. removal, and 3 rates of nitrogen in a split-split plot design on 'Penncross' mowed at 13mm (1/2 inch). The plots were mowed four times per week and deliberately contaminated with annual and perennial strains of Poa annua. Traffic was also imposed by machine.

In summary: color and quality improved with irrigation frequency and nitrogen rate, so did thatch. Divot injury increased with daily irrigation and nitrogen rate but so did recovery.

Annual bluegrass increased with nitrogen rate and traffic; the annual-biotype was also favored by biweekly irrigation, and clipping return. "Traffic control, moderate irrigation frequency, clipping removal, and low to intermediate nitrogen rate are recommended for the maintenance of acceptable turfgrass quality and playability, and the minimized annual bluegrass competition."

NEMATODES FOR PEST CONTROL: The IPM Practitioner, Jan. 1995, had an interesting article which emphasized matching the needs of these biocontrol agents with the life cycle and habits of the pests. The part I thought most worth passing along dealt with the use of nematodes for control of insect pest. They point out that "*Steinernema* nematodes, when applied to the soil for insect control, remain near the soil surface." and thus while effective for cutworms are not very good for grubs. "On the other hand, *Heterorhabditis* has a tendency to move deeper into the soil after surface application." and thus are much more effective against grubs. I suggest using combinations of both these when going after soil insects. Some data and articles I've seen seem to indicate improved pest control when two different species are used together, even at reduced rates.

They also note that the juvenile stage of the nematodes used in these cultures are extremely sensitive to temperature and humidity. They do best when kept warm and moist. They like temperatures below 86°F and very high humidity.

AARON DUPREE HAWES: born 12/15/95 to son jeffrey and his wife cynthia thus becoming your editor and publisher's fifth grandchild.

--- END ---

Happy

New

Year