

## CERTIFICATION AND MARKETING

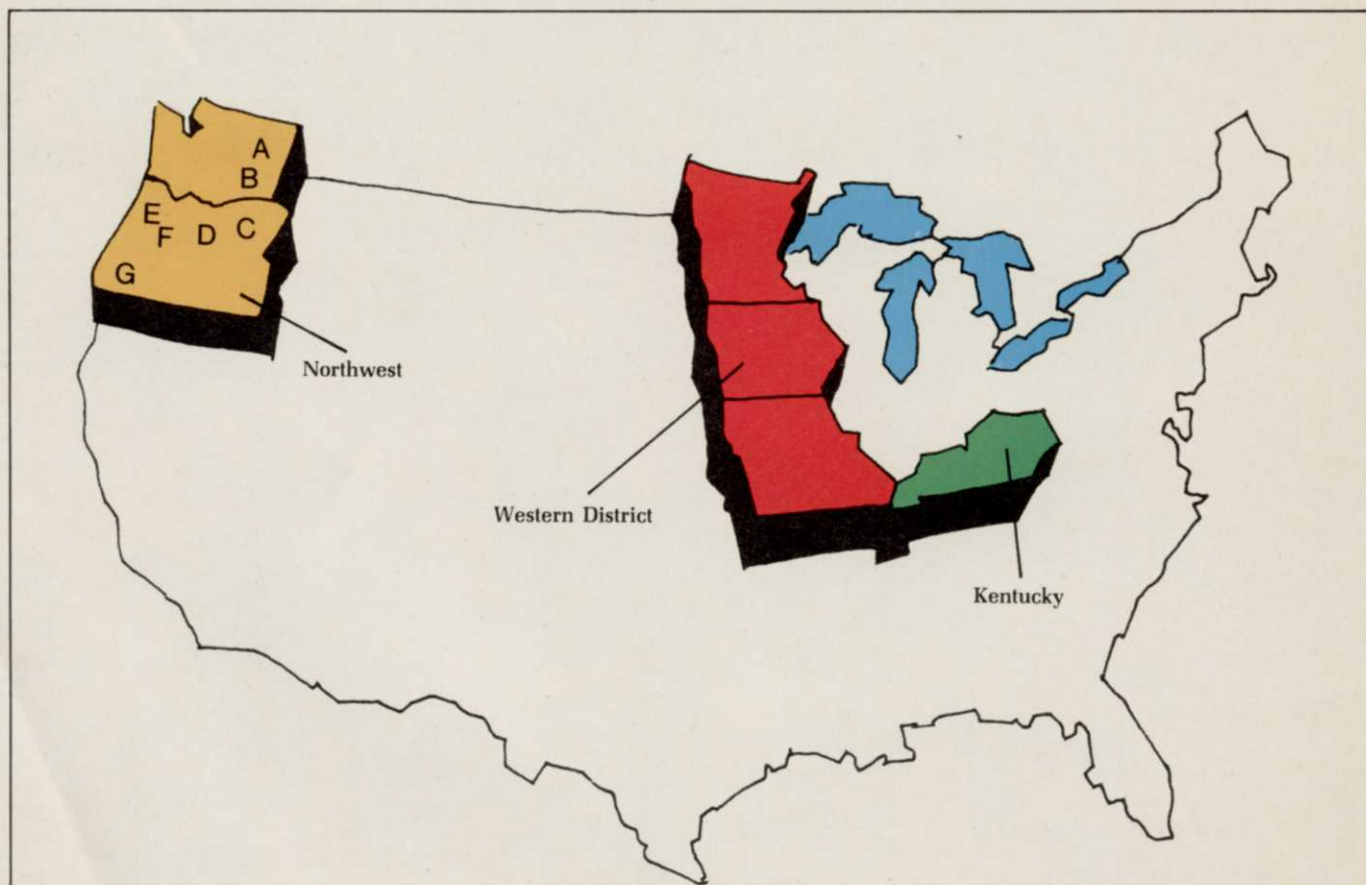
The reputation of a golf course superintendent, grounds manager, or landscape contractor depends upon his materials. Not only is it his responsibility to recommend the appropriate type of seed for a particular site, he must make certain the seed he buys is weed-free.

For example, if you are seeding a

Kentucky bluegrass/perennial ryegrass/red fescue mixture, you could end up with more bentgrass than ryegrass or fescue. Where did the bentgrass come from? If you purchased uncertified seed this is very possible. As little as two percent bentgrass in a mixture with ryegrass or fescue will provide more bent-

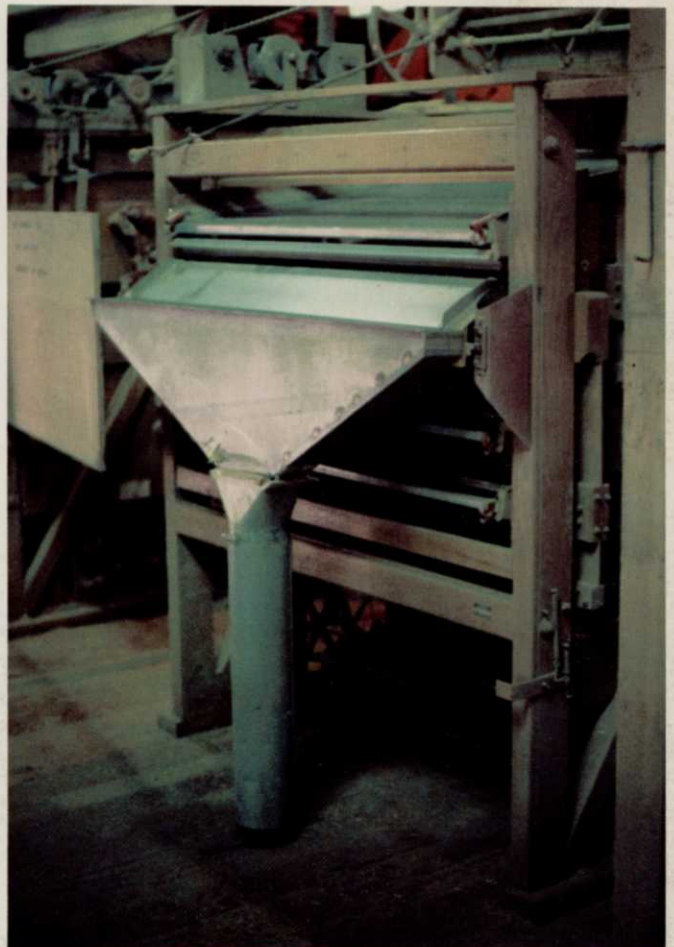
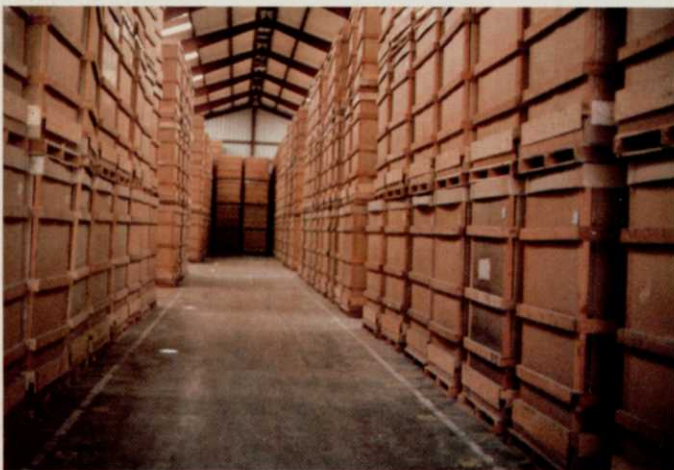
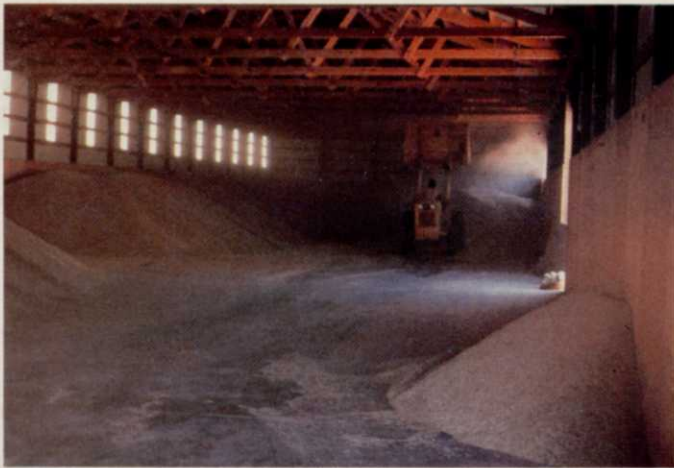
grass seeds than ryegrass or fescue seeds.

The need for certification is obvious. Under pressure from agricultural interests, states began to establish minimum purity standards in the 40's. Each state has specific requirements for seed purity. These standards are not merely about



**Seed Production Areas.** Seed stripping crews started in Kentucky in early June and worked northward in the Western District. Today, some common bluegrass is grown in the Midwest and Canada, but by far the most improved turfgrass seed is produced in the States of Oregon, Washington and Western Idaho. Notable areas in the Northwest are (A) Spokane Valley, (B) Pomeroy area, (C) Union County, OR, (D) Madras area, (E) Willamette Valley, (F) Silverton Hills bentgrass region, (G) Rogue River Valley.





**Bin storage of seed** following harvest and before cleaning (upper left).

**Seed separator** (right) which removes weed seeds, improper turfgrass seeds and trash from the seed brought from the fields and stored.

**Bulk storage** after cleaning and before bagging (bottom left).

levels of impurities in the final product, they dictate how close a field of one seed type is to a field of another type. Each step of production is inspected by state officials to keep track of the seed lot from planting to bagging.

The purpose of certification is not just to protect the consumer from impurities, it is to protect the genetic integrity of the turfgrass type. With the increased number of cultivars of a particular species of grass, it is critical to keep the seed of one separate from another. The similarities between some Kentucky bluegrass seeds is so great, even microscopic detection is impossible. You may not know what cultivar you have until the seed germinates and the actual plant becomes evidence.

To prevent intermingling of cultivars, fields used for growing seed of one type may be restricted for growth of another seed type. Fields must be at least regulation distance apart to prevent contamination

of adjacent fields. Herbicide treatments are timed to eliminate any weed seeds brought to the surface by cultivation. Burning eliminates all straw, weed seeds, and new generation seed left on a field after combining. Usually a planting produces seed for three years before it is plowed under and a new planting made. The burning does not kill the parent seed plants, only seed and trash leftover in the field after harvest.

Current production techniques were developed to produce purity at a reasonable cost. Seed is drilled into the soil rather than upsetting the soil by cultivation and surface seeding. Soil disturbance uncovers buried, but viable weed seed. Studies have shown that colonial bentgrass seed can remain viable for more than five years when buried.

One method of planting uses a seed drill and a device which covers the seeded row with activated charcoal. Herbicide is then applied with

a boom sprayer and the charcoal protects the foundation seed from harm.

After the seed has germinated and grown for two or three months, a selective herbicide is applied to remove weeds. The grass goes into dormancy for the winter.

In the spring, spot treatments are made during a procedure called roguing to eliminate offtypes and weeds.

In June and July fields are mown when still green. This eliminates losses to seed shattering by equipment. The seed dries on the stalk in windrows in the field. If it rains the windrows are turned over once. About two weeks later, providing rain has not spoiled the process, a combine is used to pick up the windrows of seed and stalk. The combine separates the seed from the other material. The seed is placed in large boxes and stored until cleaned.

Cleaning is a mechanical process involving air separation and screen-





Bags of cleaned and tagged seed ready for pickup by trucks and rail cars.

ing. It is an amazing process that can distinguish between almost identical seeds in huge volumes. Many farmers have their own cleaning plants.

When cleaning of one type of turfgrass seed is completed, the machinery is thoroughly cleaned before the next seed is cleaned. Rarely will the machinery used to clean bentgrass be used to clean bluegrass or ryegrass.

After cleaning, the seed is again stored in boxes until bagged or blended. Bags are placed on pallets and inspectors take representative samples from bags. These samples are sent to state labs for inspection. If the seed meets the standards set for certification, the bags are tagged.

Some of the checks made from seed samples are for weed seed, inert matter, and germination percentage. Perennial ryegrasses undergo a test for annual ryegrass. This test uses ultraviolet light. If more than a certain percentage of the seeds fluoresce under the light, the seed can-

not be certified.

Certification is a process which begins by filling out records prior to planting and doesn't end until the bags leave the hands of the grower. Meeting these standards adds considerably to the cost of the seed. But the results are worth the extra expense from an end-user standpoint.

#### **Marketing and Distribution**

Prior to the Plant Variety Protection Act of 1970 there was relatively little promotion of improved turfgrasses. Although chemical and equipment suppliers to the turf industry advertised in the 60's, seed companies did not begin national promotional efforts until Jacklin and a few grower associations started small schedules in 1968. The American Sod Producers Association had been created the year before and Weeds Trees & Turf, then only five years old, started to provide regular coverage of sod production. Jacklin was promoting Fylking in their original ads.

In 1972, Lofts began their promotion of Baron. Pennfine promotion first appeared in 1972. Warren's began A-20 promotion in 1973, as did Burlingham with Bonnieblue.

Today, promotion of improved turfgrasses can be estimated at more than \$1 million with shows, magazine advertising, and direct mail. At the same time the market has grown from an estimated \$62 million in 1965 to an estimated \$400 million in 1979.

The market is more sophisticated than it was in the early 60's. Quality involves more than dark green color, it involves disease resistance, germination percentages, seed mixtures, and many new varieties. Obviously, marketing helped the growers and distributors. But, it also improved the market. The individual industries which use seed are now significant markets of commercial importance. The local seed store is now a million dollar enterprise with many products. Turfgrass seed improvement is to be credited with this achievement.