

## THE SEED COMPANY

The structure of the turf seed industry is considered to be in five parts; the breeder, grower, marketer, distributor, and retailer or end-user. A seed company may perform more than one function in this arrangement. For example, Jacklin has a breeding program, owns part of its production acreage, markets the

seed in advertising and at shows, and in some cases acts as the distributor. It also contracts with farmers for production, receives breeding support from universities and other seed companies, and sells bulk to regional distributors. In fact, as part of Vaughan Jacklin Co., its parent company retails the seed.

Scotts, Lofts, Vaughan Jacklin and Northrup King market packaged seed to homeowners. Some companies sell private label seed to chain stores and all companies sell bulk to regional distributors, contractors and garden centers.

Another level of complexity is added in the production, marketing



**Early Lawn Institute Officers** in the late 50's. Shaking hands are Edward Spears (left) of Paris, KN, and William Gassnor of Kingdom City, MO. Bob Schery is on the far right.

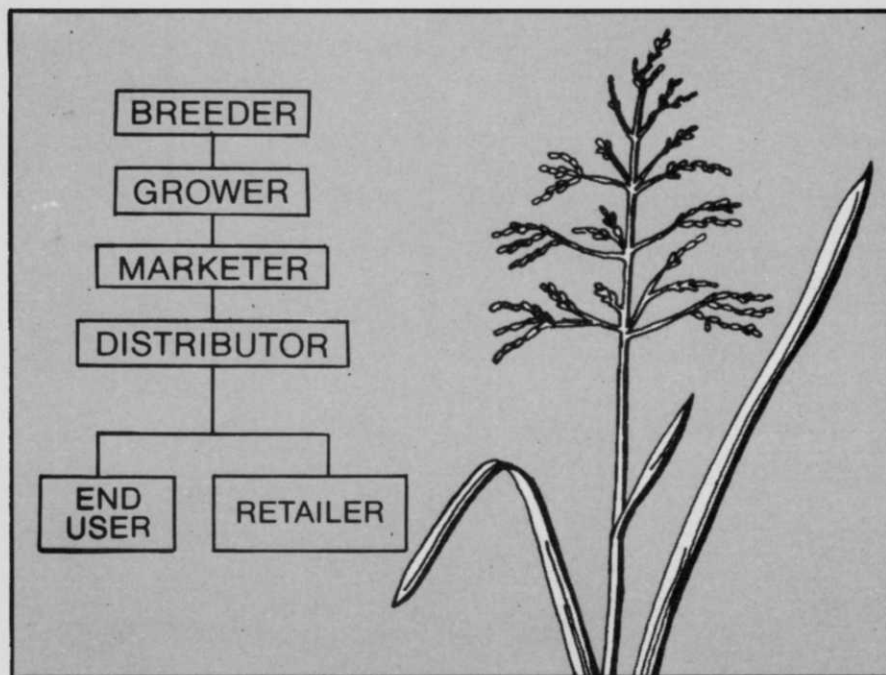
and distribution of European varieties such as Baron, Birka, Sydsport, and Fylking Kentucky bluegrasses. U.S. seed companies go directly or through brokers to European companies and arrange royalties to market European varieties. Barenbrug recently established an office in the Northwest to work directly with growers in production of seed. On the other hand, U.S. companies sell to European seed companies and grow for them under contract.

Commercial interest in producing and distributing turf seed began primarily in the 30's. Regional seed companies such as Scotts, Adikes, Lofts, Stanford, Northrup King and Rudy Patrick realized that recent developments in turf seed collection would create a demand for improved varieties. They treated the turf market for the most part as a special addition to their agricultural seed business.

After waiting patiently through the depression, war years, and most of the 50's, the seed market recuperated with a surge of new varieties. These early companies held the inside track as common varieties were replaced with improved ones. The market looked so good that W. R. Grace purchased Rudy Patrick in 1957 as a growth investment. (Rudy Patrick was also involved with agricultural seeds, so not all of Grace's interest was in turfgrass.) Rudy Patrick had its own development work underway during the late 60's. Dr. Jerry Pepin, a student of Reed Funk and currently research director for International Seeds Inc., did much of the turf seed research for Rudy Patrick during the 60's. Jim Carnes, co-owner of International Seeds, was director of specialty turf.

After a turfgrass is judged to meet quality and seed production standards, a process begins to generate seed for production. Research work may have generated less than 10 pounds of breeder seed. This breeder seed is taken by special growers and planted to produce foundation seed. It may take two or three years to produce enough foundation seed to meet the demand of the growers of the final product, certified seed. Purity is extremely important in all phases of seed production, but especially important during production of foundation seed from breeder seed. It is the foundation seed that is planted to produce the certified seed for market.

Early growers of foundation seed were Otto Bohnert in Oregon and the



Geary Brothers in Oregon. These two growers took four pounds of Merion breeder seed, which Penn State had produced from a thimbleful of seed saved by Fred Grau when the Pentagon forced the move of the Arlington Turf Gardens. They have performed similar roles with other improved varieties. Otto Bohnert was also the first grower of Newport and Penncross.

Today, breeder and foundation seed is produced under control of the seed companies owning the proprietary rights.

Disenchanted with the seed market, W. R. Grace began to divest itself of its seed companies in 1970. As a result, research locations of Rudy Patrick were purchased by investor groups, Northrup King, Olin Corp., and Nickerson, a British concern. The result was the creation of three new seed companies and the acquisition in 1972 of Rudy Patrick seed facilities in the Northwest by Northrup King and the formation of Tee-2-Green Corp. to market Penncross.

Olin Corp. and Nickerson jointly acquired most of Rudy Patrick's Kansas City facilities and created North American Plant Breeders in 1973. Jim Carnes and Willard McLagan (A prominent seed grower) purchased the Halsey, Oregon facilities of Rudy Patrick and created International Seeds, Inc. in 1972.

The third company to come out of this divestiture was Whitney-Dickinson of Buffalo, New York by an investment group including E. L. Townsend and E. J. Glatty.

As a result, Whitney Dickinson gained marketing rights to Manhattan perennial ryegrass, and North American Plant Breeders, International Seeds, and Northrup King divided much of the research work with perennial ryegrasses, bluegrasses and fescues developed by Rudy Patrick.

Another firm established in the 70's, and just beginning to enter turf seed marketing, is Agricultural Services of Oregon. Its perennial ryegrasses Pennant, Premier and Pronto were developed in cooperation with Reed Funk at Rutgers. John Rutkai and Dave Amoth formed the company in 1973. According to Rutkai the extensive breeding advances in the U.S. turfgrass industry will shorten the commercial life of most varieties, creating new introduction more quickly.

Turf Seed of Hubbard, Oregon, was created in 1970 by another Rudy Patrick marketing specialist, Dick Bailey, and Bill Rose, a big producer of Merion seed and president of the Manhattan Ryegrass, Penncross Bentgrass, and Exeter Bentgrass associations. Rose had produced the first foundation seed of Manhattan.

Originally the company concentrated on Merion seed production and Manhattan perennial ryegrass as comarketers with Whitney Dickinson of Buffalo, New York. In 1975, Bill Meyer joined Turf Seed as full-time researcher to improve seed yields of current varieties and create new varieties. Meyer created Pure Seed Testing and played a major role in the introduction of Shasta

E. F. BURLINGHAM & SONS



## Distributors

Seaboard Seed Co.  
P.O. Box 117  
Bristol, Illinois 60512  
(312) 553-5801

Jacklin Seed Company  
Rt. 2, Box 402  
Post Falls, Idaho 83854  
(208) 773-7581

Southern States Cooperative  
P.O. Box 26234  
Richmond, Virginia 23260  
(804) 782-1000

Puget Sound Seed Co.  
1050 W. Nickerson  
Seattle, Washington 98119  
(206) 282-2077

Ohio Seed Company  
P.O. Box 598  
West Jefferson, Ohio 43162  
(614) 879-8366

Twin City Seed Co.  
500 30th Ave. N.E.  
Minneapolis, Minnesota 55418  
(612) 789-8821

Williams Lawn Seed Co.  
Maryville, Missouri 64468  
(816) 582-4614

The Terre Company  
206 Delawana Ave.  
Clifton, New Jersey 07014  
(201) 473-3393

Oseco, Ltd.  
P.O. Box 219  
Brampton, Ontario, Canada  
(416) 457-5080

Richardson Seed Co., Ltd.  
Rear of 7342 Winston St.  
Burnaby, British Columbia  
Canada V5A2H1  
(604) 294-8292

and Columbia Kentucky bluegrasses; Citation, Omega and Birdie perennial ryegrasses; and very soon improved types of Merion and Manhattan. This year Turf Seed will produce and market a new tall fescue, Falcon. Turf Seed also produces seed for Warren's A-20, A-34, I-13, and A-20-6A.

From its inception in 1972, International Seeds Inc. took an aggressive marketing position with material acquired from Rudy Patrick and arrangements with Van Engelen and SUBICO of the Netherlands. They have European rights as well as U.S. rights to many proprietaries.

Jerry Pepin moved to International with the Rudy Patrick breeding program and released Derby perennial ryegrass in 1975 and Regal in 1976. North American Plant Breeders markets both Regal and Enmundi Kentucky bluegrass from International.

International has marketing rights to Emerald creeping bentgrass, Highlight chewings fescue, Merit Kentucky bluegrass, and Shasta Kentucky bluegrass. International is co-breeder and marketer of Admiral Kentucky bluegrass. It produces Vantage Kentucky bluegrass for O.M. Scott & Sons.

International Seeds has entered the southern overseeding market with DixieGreen and Sabre, *Poa trivialis*.

International developed America Kentucky bluegrass which is marketed by Pickseed West Inc.

Seaboard Seed Co. was founded in Philadelphia in 1932 as a farm seed company. Following the war, Seaboard entered the turfgrass seed market, and added a branch in Bristol, Illinois. In 1962, the company was merged into Heritage House Products, part of Diamond Alkali Co. In 1965, E.F. Burlingham & Sons went together with Chris and G.H. Valentine, and Alan Hirsch to purchase the turfgrass seed business of Heritage House as well as the Bristol, Illinois facility.

Pickseed West in Tangent, Oregon was created by Martin and Tom Pick, of Otto Pick & Sons Ltd. in Canada and Kent Wiley, son of a seed broker in 1970. Today they have several agronomists on staff and have acquired rights to a number of improved grasses out of Rutgers and Rhode Island. Touchdown Kentucky bluegrass is one of these that has experienced high acceptance in the market. They have just announced production of America, from Rutgers breeding work. America exhibits

good resistance to disease and good shade tolerance. Pickseed is calling America a low maintenance bluegrass. Recently, Pickseed arranged to begin marketing of material from Rhode Island, such as Exeter, Colonnail bentgrass and Kingstown velvet bentgrass.

Of course, many of these companies would not exist today had it not been for the foundation built by the early seed companies. Jacklin, Scotts, Rudy Patrick, Lofts, Northrup King, Stanford, Adikes, Warren's and Burlingham survived and prospered through the conversion from common to improved turfgrasses. They made investments in research and technology when needed to serve the professional turf market as well as the (homeowner market). They worked with universities, anticipated changes in market demand, and seed production technology, and put marketing money behind the new turfgrasses.

Warren's began as a turf nursery in 1938 by Ben Warren near Chicago. Warren's interest was in improved grasses for sod, not so much for seed. He and his staff were primary collectors of new material from golf courses, parks, and lawns across the U.S. His collection work paid off well with the material that contributed to the production of A-20 and A-34.

Much of Warren's sod production was by vegetative means and only in the last ten years has Warren's sought to produce seed. Today, Warren's remains a sod producer first, and a seed producer second.

Jacklin Seed Company is a multifaceted company serving both the professional and homeowner markets. It was founded in 1935, by Ben Jacklin and his three sons Lyle, Owen and Arden, in Dishman, WA., originally a grower of seed peas. Arden Jacklin after serving the Soil Conservation Service, convinced his father and brothers to get behind the turfgrass market in the 40's obtaining foundation seed from Otto Bohnert and Ed Geary. Initially, the Jacklins produced some field grasses and creeping red fescue. At that time they had to have the seed cleaned at the only seed cleaning plant in the area owned by Max Hinricks. Jacklin received some of the first foundation seed of Merion and put full effort into production.

It has since provided a considerable amount of production and promotion for various other improved grasses such as Glade, Fylking, Newport, Nugget, Birka.





**Peter Loft**

President of Loft's Pedigreed Seed Co., Peter and his brother Jon manage a diverse company in the turf and vegetable seed industry. Loft's proprietaries include Baron, Jamestown, Ram I, Yorktown, Rebel and Pinto reclamation mixtures.

Jacklin has commercial relationships with nearly all major seed companies in the world. They work closely with Lofts on reclamation mixtures and improved grasses. They work with many European firms for production and distribution. They produce much of the seed for Scotts, Bristol and Windsor, and Warren's A-20 and A-34.

Equally as significant are Jacklin's contributions to seed production technology. Row cropping to produce foundation seed had been done before by Bohnert, but Jacklin applied it to the production of certified seed. The original technology was using a stripper on natural stands in the midwest. In the Northwest this technology was altered to solid seeded stands of grasses which were cut and dried on large concrete drying slabs. Arden Jacklin applied row cropping to the field production of certified seed, used a swather to put the cut grass in windrows for drying in the field, and used a combine to pickup and separate the dried seed from the stems. This technology cut losses of seed during drying and reduced seed handling to a minimum.

In 1972, Jacklin Seed Co. merged with Vaughan Seed Co. of Chicago to form the Vaughan-Jacklin Corpora-

tion. The Jacklin Seed division maintains its original integrity under this agreement according to Doyle Jacklin. In 1978, Jacklin moved to a new location in Post Falls, Idaho, and is rapidly expanding its seed handling and storage facilities there.

Today, Jacklin handles 80 different proprietary turfgrasses, half of which are in commercial production. It owns 5,500 acres and contracts another 16,000 acres for production.

Northrup King Co. began the first commercial breeding effort on the perennial ryegrasses for turfgrass use in 1956.

Northrup King Co., founded in 1884 as a seed store in Minneapolis, Minnesota, entered the turf seed business in the 40's with a line of lawn seeds. It was one of the first developers of improved varieties of agricultural crops in the 30's, with corn, and radishes.

Northrup King was among the first U.S. companies to begin a turfgrass breeding program in 1948, for ryegrasses and Kentucky bluegrass. In 1954, the first turfgrass trials to contain a large group of European varieties was established. During the early 60's, Northrup King released NK100 perennial ryegrass, Holfior Colonial bentgrass, Pelo perennial ryegrass, Prato Kentucky bluegrass and Ruby creeping red fescue. NK100, sold primarily through J & L Adikes, was the first improved turf-type perennial ryegrass made available to the market. Holfior was the first pure colonial bentgrass released in the U.S. and Ruby was the first pure spreading red fescue released in the U.S. Newport was the second improved bluegrass variety released in the U.S., following Merion.

Northrup King was one of the first to recognize and supply an overseeding mixture for the South with the release of Medalist in 1970. In 1972, it released NK200 perennial ryegrass which exhibited improved winter hardiness. In 1974, NK released Aquila and Parade Kentucky bluegrass varieties.

Since that time, Northrup King has been part of the release of the cultivars Adelphi Kentucky bluegrass, Pennfine Perennial ryegrass, Rugby Kentucky bluegrass, Eton, Delray, and Goalie perennial ryegrasses; Wintergreen and Atlanta Chewings fescues; Dawson red fescue; Scaldis hard fescue, and Fults *Puccinellia distans*.

Lofts Pedigreed Seed, Inc. was founded in 1923 by Selmer Loft as a local seed supplier. From its New Jersey location, it has been close to nearly all U.S. breeding work from Rutgers. Today, Peter and Jon Loft manage one of the largest seed companies in the U.S.

In 1962, Lofts purchased Great Western Seed Co., in Albany, Oregon, which had vast production contacts in the Willamette Valley and marketing arrangements with European seed producers. This strengthened its marketing and production position in the turf seed market. Through a series of expansion and acquisitions, Lofts broadened its base even further with outlets in Maryland, New York, Massachusetts, Wisconsin, and recently Sunbelt Seeds in Tucker, Georgia.

Lofts' closeness to university research, Northwestern production, European seed companies, and other U.S. seed companies, positions it very close to the center of the turf seed industry. Lofts and Jacklin are cooperating on reclamation mixtures for the future.

Included in the Lofts' stable of U.S. proprietary varieties are: Baron, Ram I, Georgetown and Mystic Kentucky bluegrasses; Yorktown, Yorktown II, and Diplomat perennial ryegrasses;



**Bob Peterson**

In the 15 years that Peterson has worked for E. F. Burlingham he has arranged for the proprietaries Bonnieblue, Majestic, Banner, and Falcon.

Rebel tall fescue; Jamestown chewings fescue; and Beamont meadow fescue. Lofts and Jacklin share rights to the Pinto Reclamation mixtures.

O.M. Scott & Sons is greatly responsible for the commercial success of both professional and homeowner seed markets. Founded as a supplier of agricultural seeds in 1870, by Orlando Scott and his sons Hubert and Dwight. In 1890, the company began to handle turf seed and was prominent in the early years of common seed production in the Midwest. In the early 20's Scotts was a supplier of seed and stolons to golf courses and was the first to market German bentgrass to U.S. golf courses. In 1928, realizing the potential of the homeowner market long before others, Scotts began publication of Lawn Care, a small magazine of how-to tips for homeowners. Combined with the seed and the release of Turf Builder, the first turf fertilizer formulated for lawns, Scotts had begun to provide homeowners with a total lawn care package that was supported by educational material on its use. In 1936, the spreader was added to the product line, and in 1941, Scotts was one of the first to market 2,4-D as a turf herbicide. Another accomplishment was the introduction of the first preemergent crabgrass herbicide in 1950.

Scotts was more than a seed producer. Its emphasis was on meeting all the turf needs of a customer, not just one. Scotts has one of the largest turf research centers at its ProTurf headquarters in Marysville. The ProTurf Division was created in 1965 to realign the company with professional users of turf products. The division provides technical assistance in addition to products to golf course superintendents and landscape contractors across the U.S. ITT purchased Scotts in the early 70's.

Some of the improved turfgrass seed sold by Scotts includes Vantage, Victa and Bristol Kentucky bluegrass; Loretta and Caravelle perennial ryegrass; Banner chewings fescue, and Biljart hard fescue. Scotts deals with Jacklin for much of its seed production needs.

E. F. Burlingham and Sons was formed in the early 1900's by E. F. Burlingham as a feed and seed operation in Forest Grove, Oregon. His son Gordon and grandson George have followed in his footsteps. Burlingham has been involved in a variety of ways with the seed market. The company has a reputation as an international trader

of turf seed due to its North American rights to European turfgrass seed such as Sydspport and Birka. These grasses may be sold by other seed companies but they are marketed through Burlingham as the wholesaler.

In 1964, Bob Peterson joined Burlingham from Northrup King and proceeded to arrange marketing rights for new material from Rutgers. These arrangements include turf seed Majestic and Bonnieblue bluegrasses; Banner chewings



**Dwight Scott**

*Son of the founder of O. M. Scott & Sons, Dwight led the company through the first half of the 20th Century. His goal was a complete product line for the turf industry and consumer education through Lawn Care.*

fescue; Belle perennial ryegrass; and Falcon tall fescue.

Prior to this new material, Burlingham had handled mainly public varieties such as Merion, Highland bentgrass, Pennlawn red fescue, Linn perennial ryegrass and others. They manage seed production for re-export to seed companies in Europe.

J. & L. Adikes, like Scotts, was founded in 1855 as a local seed supplier and added a line of turf seeds later, in this case the early 30's. Located in Jamaica, New York, Adikes was not far from universities working on improved varieties. The company played an early role in the marketing of NK100 perennial ryegrass. Bob Russell, vice president, tells the story that Northrup King had abandoned the seed as a poor seed producer. He obtained some seed and had it tested in two different locations and it proved to be green longer in the fall and earlier in the spring. Adikes got Northrup King to look for any leftover NK100 seed. They found about 300 pounds and Northrup King took it from there, arranging production and Adikes handling marketing. This was prior to variety protection regulations and Adikes had to devise a way to protect its investment in the perennial ryegrass. This was accomplished by only selling NK100 in a mixture. Adikes took all production of NK100 into the mid 70's. Russell believes this experience with NK100 in the late 50's got Reed Funk interested in a perennial ryegrass improvement program at Rutgers which resulted in the development of Manhattan.

Adikes owns the rights to the first bluegrass hybrid from Reed Funk and Jerry Pepin at Rutgers, Adelphi. Adelphi is considered one of the most consistent bluegrass performers across the country. Adikes was an early promoter of using a blend of bluegrass over a single one in the mid-50's.

Stanford Seed Co. in Plymouth Meeting, Pennsylvania, is a strong supporter of the reclamation market with Penngift crownvetch, Tioga deertongue, Birdsfoot Trefoil and Lathco flatpea. It was also the original marketer of Pennfine perennial ryegrass. The company has placed reclamation and highway grasses as a specialty.

In late 1979, Stanford arranged the purchase of Whitney Dickinson in Buffalo, New York, and thereby regained a marketing role with Pennfine as a member of SPIC. Stanford had earlier been one of the original marketers of Pennfine.