

Soil Physical Conditions

- Soil Aeration. Pennsylvania Agricultural Experiment Station, State College, Pa.
Study of the Mechanical Composition of Soils in Relation to Turf Development.
Project #669. Oklahoma Agricultural Experiment Station, Stillwater, Okla.
- Studies on Physical Characteristics of Soils. Pennsylvania Agricultural Experiment Station, State College, Pa.
- Soil Relation to Growth of Bents, Bluegrass, Red Fescue. Michigan Agricultural Experiment Station, East Lansing, Mich.
- Mechanical Cultivation of Turf. California Agricultural Experiment Station. UCLA, Los Angeles, California.
- Soil Compaction and Amendments. M. R. Huberty. California Agricultural Experiment Station, UCLA, Los Angeles, Calif.

Grasses

Zoysia Studies at USGA Green Section, Beltsville, Md.

- Critical Studies on the Nutritional Requirements of Zoysia in Relation to Seed Production and Turf Quality (Greenhouse Studies Supplemented by Field Plot Work).
- Seed Harvest Methods.
- Seed Storage Methods.
- Establishment Procedures - Rates, Dates, and Methods of Seeding - Vegetative Planting Methods.
- Evaluation of Turf Produced by Vegetative Propagation and by Seeding Various Zoysia Strains.
- Management of Zoysia Turfs in Relation to:
- Seed Yields.
 - Adaptation to Varying Turf Uses.
 - Ability of Different Zoysia Strains to Associate Harmoniously with Various Cool-Season Grasses.
 - Ease of Harvesting Seed as Affected by Different Types of Management.
- Grass Variety and Turf Management Studies. V. T. Stoutemyer, California Agricultural Experiment Station, Los Angeles, Calif.
- Evaluation of Improved Strains on Specialized Use Tests. Texas Agricultural Experiment Station, College Station, Texas.
- Ecology of Grass Mixtures. California Agricultural Experiment Station.
- Adaptation of Turf Grasses. Florida Agricultural Experiment Station.
- The Development of Superior Turf Grasses. Georgia Coastal Plain Experiment Station, Tifton, Georgia.
- Study of Adaptation of Species and Strains for Fairway and Lawn Use. Kentucky Agricultural Experiment Station, Lexington, Ky.

Grasses (continued)

- Study of Species and Strain Adaptation and Management. Oklahoma Agricultural Experiment Station, Stillwater, Okla.
- Turf Development and Maintenance. Project #628. Breeding Work on Bermuda and Buffalograss. Oklahoma Agricultural Experiment Station, Stillwater, Okla.
- Strain Testing. Pennsylvania Agricultural Experiment Station, State College, Pa.
- Production of Improved Strains of Grasses. Pennsylvania Agricultural Experiment Station, State College, Pa.
- Collection and Evaluation of Species and Strains of Turf Grasses According to Their:
- Seeding Ability
 - Vegetative Characteristics and Habits
 - Reaction to Environmental Factors
- Texas Agricultural Experiment Station, College Station, Texas.
- Association of Improved Strains of Cool Season Grasses. Pennsylvania Agricultural Experiment Station, State College, Pa.
- Rhode Island Bent Selections for Turf and Seed Production. J. A. DeFrance and T. E. Odland. Rhode Island Agricultural Experiment Station, Kingston, R. I.
- Mixed U-3 Bermudagrass and Kentucky Bluegrass for Turf. Kentucky Agricultural Experiment Station, Lexington, Ky.
- Relative Turf Qualities of Different Species and Strains of Turf Grasses. Kentucky Agricultural Experiment Station, Lexington, Ky.
- Turf Quality of Different Turf Grasses Mowed at Different Heights. Kentucky Agricultural Experiment Station, Lexington, Ky.
- Zoysia Tests. Kentucky Agricultural Experiment Station, Lexington, Ky.
- Alta Fescue. Oregon Agricultural Experiment Station, Corvallis, Oregon.
- Kentucky 31 and Alta Fescue Comparisons. Kentucky Agricultural Experiment Station, Lexington, Ky.
- Test Bent Putting Green. Massachusetts Agricultural Experiment Station, Amherst, Mass.
- A Test of Bentgrasses for Putting Green Turf. New Jersey Agricultural Experiment Station, New Brunswick, N. J.
- A Comparison Study of Five Colonial Bents and Five Red Fescues. New Jersey Agricultural Experiment Station, New Brunswick, N. J.
- Highland Bent. Oregon Agricultural Experiment Station, Corvallis, Oregon.
- Breeding and Testing of Bents and Fescues. Pennsylvania Agricultural Experiment Station, State College, Pa.
- Thirty Strains Bentgrass Tested for Adaptation. Congressional, Arlington and Old Orchard Found Superior. Iowa Agricultural Experiment Station, Ames, Iowa.

Grasses (continued)

Strains Tested for Disease Resistance (dollarspot particularly). Arlington, Old Orchard, Congressional, Metropolitan, Toronto, Washington, and Norbeck. Iowa Agricultural Experiment Station, Ames, Iowa.

A Comparison of Four Kentucky Bluegrass Strains. New Jersey Agricultural Experiment Station, New Brunswick, N. J.

Merion (B-27) Bluegrass. Nearly all stations.

Red Fescues. Oregon Agricultural Experiment Station, Corvallis, Oregon.

U-3 Bermuda Added to Nursery to Test for Winter Hardiness. Iowa Agricultural Experiment Station, Ames, Iowa.

Study of U-3 Bermudagrass and Bluegrass, Including Merion Bluegrass. Kentucky Agricultural Experiment Station, Lexington, Ky.

Study of Bermudagrass Strains in Association with Bluegrass Turf. USGA Green Section, Beltsville, Md.

Performance of Z-52 and U-3 Bermuda in Combination with Cool-season Grasses. New Jersey Agricultural Experiment Station, New Brunswick, N. J.

Breeding of Turf Grasses. Indiana Agricultural Experiment Station, Lafayette, Indiana.

1. Approximately 200 individual plants have been selected, principally for drought tolerance, from a large single plant bent nursery. These have been propagated during 1950 and will be put into replicated plots in 1951 to be tested principally for adaptability to fairway use.
2. A study to compare two methods of covering bent grass seed stalks for purposes of obtaining self-pollinated seed was conducted on S_1 plants in the field in 1950. This study was made in connection with attempting to obtain S_2 seed from these plants. Germination tests indicate extremely wide differences in open pollinated seed production among the S_1 plants and germination tests on the selfed seed will be conducted in the spring of 1951.
3. Freezing resistance studies have been conducted on a series of Zoysia japonica and Zoysia matrella seedlings. The plants, in flats, were subjected to freezing temperatures to evaluate the parental clones as to prepotency for tolerance to freezing, and to isolate individual plants which demonstrated an ability to survive low temperatures.
4. Individual plant nurseries have been established from open pollinated seed of several Zoysia japonica clones. These individual plants will be compared and evaluated for possible fairway and tee grass use.
5. A study was made to determine whether certain growth regulating substances might be effective in stimulating seed production by creeping bent grass strains under greenhouse conditions. Varying concentrations of 2, 4-D, MCP, and TCA were applied to two strains of bent grass (C-1 and C-36). The results were entirely negative, no seed heads being produced.

Grasses (continued)

Combination of Warm-Cool Season Grasses. Indiana Agricultural Experiment Station, Purdue University, Lafayette, Ind.

1. U-3 bermuda overseeded with three different grasses to be maintained under different heights of cut, nitrogen levels, and soil moisture ranges. Begun 1950.
2. U-3 bermuda under golf course play - Purdue golf course - overseeded with 4 grasses. Similar plots maintained at Westwood Country Club, St. Louis, Mo.
3. Five bermuda strains overseeded with Merion bluegrass. Begun 1950.
4. Clonal plantings of Zoysia japonica and Zoysia matrella have been established to study the relative adaptabilities of several common clones alone and in combination with cool season grasses.

Bentgrass Plots and Test Greens (Species and Strain Testing 1940-1951 and continuing). Iowa Agricultural Experiment Station, Ames, Iowa.

Adaptation and Management of Cool-Season Grasses. Georgia Coastal Plain Experiment Station, Tifton, Ga.

Selection Studies with Strains of Bermuda and Bentgrasses Maintained Under Putting Green Conditions. Florida Agricultural Experiment Station.

Testing New Selections of Grasses for Use in Lawns. Florida Agricultural Experiment Station.

Testing a Number of Grasses for Turf Qualities and Climatic Adaptation When Maintained Under Turf Conditions. Northern Virginia Pasture Research Station, Middleburg, Va.

Testing Companionability and Development of Certain Warm-Season and Cool-Season Grasses When Grown Together Under Turf Conditions. Northern Virginia Pasture Research Station, Middleburg, Va.

Management Studies on U-3 Bermudagrass to Learn Reaction to:

- Fertility Levels
- Heights of Cut
- Methods of Planting
- Association with Cool-season Grasses.

USGA Green Section, Beltsville, Md.

Evaluation of Bentgrasses from Seed and from Stolons Under Varying Management Conditions for Fairways and for Lawns. USGA Green Section, Beltsville, Md.

Studies of Nurse Grasses and Their Effects on Permanent Species. USGA Green Section, Beltsville, Md.

Evaluation of Various Grasses in Turf from the Standpoint of the Effects of Traffic. USGA Green Section, Beltsville, Md.

Studies on the Value of Tall Fescues Alone and in Mixtures. USGA Green Section, Beltsville, Md.

Grasses (continued)

- Evaluation of Selections of Bentgrasses for Quality Factors for Use on Putting Greens and Fairways. USGA Green Section, Beltsville, Md.
- Evaluation of Merion (B-27) Bluegrass and Common Bluegrass Alone and in Combination with other Grasses. USGA Green Section, Beltsville, Md.
- Evaluation of Red Fescue Strains in Cooperation with Pennsylvania Experiment Station. USGA Green Section, Beltsville, Md.
- Tested Winter Hardiness of Bermudagrass. Strain unknown. Massachusetts Agricultural Experiment Station, Amherst, Mass.

Seed Production

- Seed Production Studies. Pennsylvania Agricultural Experiment Station, State College, Pa.
- Studies to Determine the Optimum Storage Conditions for Zoysia Seed. USGA Green Section, Beltsville, Md.
- Seed Production in Turf Grasses. Georgia Costal Plain Experiment Station, Tifton, Ga.

Grass Nurseries

- Production of Nursery Stock of Improved Strains of Grasses by Vegetative Propagation. USGA Green Section, Beltsville, Md.
- Increase Nursery for Proven Strains for Distribution. Indiana Agricultural Experiment Station, Lafayette, Ind.
- Development of Improved Strains by Breeding for:
- Resistance to disease
 - Recovery from injury (use)
 - Tolerance to climate
 - Appearance and wearing qualities
 - Turf-forming qualities
 - Drought resistance
 - Soil-nutrient requirements
- Texas Agricultural Experiment Station, College Station, Texas.
- Increase Nursery for Proven Strains for Distribution. Georgia Costal Plain Experiment Station, Tifton, Ga.

Weed Control

- Types of Herbicides and Their Uses. Jesse Skoss. California Agricultural Experiment Station, UCLA, Los Angeles, Calif.
- Herbicide Tests. John Gallagher, Jr. California Agricultural Experiment Station, UCLA, Los Angeles, Calif.