

TECHNICAL NOTES

COFFEEVILLE PLANT MATERIALS CENTER

No. 3

Coffeeville, Mississippi

1985

INITIAL EVALUATION OF BRUNSWICKGRASS

Abstract

Six accessions of brunswickgrass were evaluated in 1982 and 1983 using 'Amcorae' for the standard. All survived the first winter but in a weakened condition. All died the second winter when the temperature dropped to a low of -2° F. They were apparently no more winter hardy than Amcorae, and evaluations were too few to determine if any were more productive. Brunswickgrass is recommended only for the southern part of the Coffeeville Plant Materials Center (PMC) service area, the southern half of Louisiana and coastal counties in Mississippi.

Introduction

Brunswickgrass (Paspalum nicorae Parodi) is a perennial, sod-forming, warmseason grass that is native to Southern Africa. It is established from seed and produces large quantities of hay or forage. It has potential for most of Louisiana and southern Mississippi. Amcorae has been grown for several years at the Coffeeville PMC. Except for winters having sub-zero weather, it will survive but in a weakened condition. Usually the grass re-establishes from seeds. Of all accessions of brunswickgrass previously tested at the PMC, Amcorae has been superior.

Recent tests at the PMC in Americus, Georgia, have shown other accessions to be more productive than Amcorae. To determine if any of these could withstand lower temperatures, hardiness testing was done at the Coffeeville PMC.

Materials and Methods

Plant Materials sent to the Coffeeville Plant Materials Center for evaluation were

Year Planted

PI Numbers

1982

202044, 304004, 310131, 310135, 404859

1983

310131, 490363, 490364

Amcorae (PI-202044) was the standard for comparison.

Seeds of each accession were germinated in the greenhouse in February 1982 and seedlings planted in the field in May. The soil (Oaklimeter sil., 0-2 percent slopes) had been pulverized and treated with methyl bromide for weed control. Fertilizer (13-13-13) had been applied at the rate of 600 lbs./acre.

Each accession was planted 60cm apart in a single row 6m long. Rows were 2m apart. The area was cultivated and fertilized when necessary.

Evaluations were made periodically throughout the growing season from 1982 to the spring of 1984 according to standard procedures described in the National Plant Materials Manual. Data were stored in the National Plant Materials Data Base at Fort Collins, Colorado. Evaluations were made for foliage and seed production, hardiness, vigor and resistance to insects and disease. Height and width were measured in centimeters, other evaluations were rated subjectively on a scale of 1 to 9 with 1 considered to have the best appearance. A zero (0) indicated the plant is dead.

Results

All accessions grew well the year they were planted. The low temperature for winter of 1982-83 was only 16° F, and all accessions survived but were weakened and slow to recover in the spring of 1983. In the winter of 1983-84, the temperature dropped to -2° F., and all of the original plants died. Seedlings did emerge but the identity of the accession was no longer possible and the project was terminated. Data for evaluations are in Table I.

Discussion

Not enough data had been gathered to analyze and make conclusion with confidence except that all lacked sufficient cold tolerance to be successful at the latitude of Coffeerville, Mississippi. Perhaps some accessions are more productive than the standard Amcorae but this work will have to be done at a more southern location.

TABLE I - EVALUATIONS FOR BRUNSWICKGRASS AT COFFEVILLE PMC
Project 281181G

PI NUMBER	YR	RC	FOL HT	FOL WD	FOL ABN	FOL UNI	FOL %	VIG 1	VIG 2	AMT	SD FIL	SD UNT	SD HT	SPRING RECOV	BLOOM DATE	DORM DATE
202044	1982		31	71	3	1	100	3	3	3	3		76		07/08	11/05
	1983		31	122	1	3	100	1	3	5	1	1	80	04/1	07/12	11/21
	1984						0	0								
30000C	1982		31	71	1	1	100	1	3	3	1	3	71		07/08	11/05
	1983		31	100	3	3	50	6	3	5	3	3	66	05/05	07/12	11/27
	1984						0	0								
310131	1982		31	76	1	3	60	3	3	3	1	3	50		07/07	11/05
	1983		36	56	3	3	60	3	3	5	3	3	76	05/05	08/04	11/21
	1984						0	0								
310131*	1983		31	61	3	1	100	1	3	5	3	1	61		07/26	11/27
	1984						0	0								
310135	1982		25	46	3	1	100	3	3	3	3		71	05/05	07/08	11/05
	1983		36	130	1	3	100	3	1	1	2	1			07/28	11/27
	1984						0	0								
000859	1982		20	51	3	5	30	5	5	5	3		90		07/21	12/02
	1983		38	61	3	1	25	5	3	3	1	1	76	05/05	07/14	11/27
	1984						0	0								
090363	190E		31	46	5	1	100	3	3	5	3	1	61		07/28	11/27
	190C						0	0								
09036C	198E		26	41	5	3	20	5	5	3	1	3	66		07/21	11/27
	198C						0	0								

* Second row planted in 1983.

Legend: YR - RC = Year of Record
 FOL HT = Foliage Height (cm)
 FOL WD = Foliage spread (cm)
 FOL ABN = Foliage Abundance
 FOL UNI = Foliage uniformity
 % STD = Percent Stand
 VIG 1 = Early season vigor
 VIG 2 = Mid-season vigor
 SD AMT = Seedbed Amount
 SD FIL = Seedbed fill
 SD UNI = Seed uniformity
 SPRING RECOV = Spring Recovery Date
 DORM DATE = Dormancy Date