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TECHNICAL NOTES

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SOIL CONSERVATION SERVICE

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Davis, California

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FIELD PLANTING SUMMARY - CASA QUAILBUSH

Attached is a performance summary of 'Casa' quailbush in California from 1974 to 1984. This data was collected from annual evaluation reports made through the local field offices. This information supports the cooperative work done through the California Department of Fish and Game earlier.

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Attachment

Summary of Field Planting Performance of CASA quailbush
in California 1974-1984

Introduction

'Casa' quailbush, Atriplex lentiformis is a native erect, spreading, evergreen shrub. It was originally collected from plants along Highway 25, one half mile south of Paicines, San Benito County in November, 1964. 'Casa' is one of three upland game shrubs released in 1978 and tested cooperatively with the California Department of Fish and Game. It's been used and tested on various critical areas, for upland game cover and for environmental enhancement.

Performance

'Casa' quailbush has been planted in 43 field plantings in California since 1974 (see appendix 1). Plantings have been made in the following MLRA's:

MLRA	Number	Success	Failure
14	3	2	1
15	9	2	7
17	19	8	11
18	6	3	3
19	2	1	1
20	3	2	1
30	1	1	0
	43	19	24

Plantings have showed about 44% success. This was considered good because of the many factors affecting initial establishment of a shrub in a very competitive environment. If the drought and flood year losses were eliminated, the major cause of failure was poor establishment techniques. Irrigation of container plants, protection from grazing and weed control through the first year is required for optimum establishment. Over half of the seeded plantings were a success. The key was reduced competition and better moisture conditions the first year of seeding.

'Casa' preferred medium to fine-textured soils that were well to poorly, drained. It survived on ten inches of rainfall when irrigated through the first dry season. It grows best on slightly acid to strongly alkaline soils.

,Conclusions

'Casa' quailbush is a superior native strain for use in California up to 2000 feet in elevation and where annual rainfall is at least ten inches. It grows on alkaline and salty soils and prefers those with higher water holding capacity. The proper planting, care and protection of 'Casa' during the first year are essential for successful establishment of plants. The major uses of 'Casa' have been for upland game habitat and erosion control of natural areas.

APPENDIX 1

Performance Summary_of_CASA-quailbush

_No	Landowner	MLRA	(E)	1974-1985 Soils	Rainfall	Performance
1967-74	C. Small	20	El Cajon	Fallbrook	10	Excellent survival & growth with water.
1976-74	H. Liggett	15	King City	Sheridan	20	No survival.
1988-75	Ballica RCD	17	Merced	Rocklin	12	Fair to good stand, direct seeded.
2011-75	C. Shirk	17	Colusa	Willows	15	Good survival and growth.
2026-75	P. Schifano	17	Patterson	Dinuba	10	Flooded. Plants washed o
2044-76	Tiechert	17	Sacramento	Gravel pit	16	No survival from seed.
2045-76	Cal Clark	17	Hanford	Trover-Kimberlina	8	Plowed up by mistake.
2046-76	Hidden Valley	19	Riverside	Grangeville Arlington	12	Excellent stand and growth from seed.
2067-76	M. Blasingame	18	Fresno	Unknown	18	Good stand from seeding, some irrigated.
2117-76	SMUD	17	Sacramento	Redding	16	Plants did not survive, heavy grazing.
2119-76	Monterey R g. Park	14	Salinas	Junipero-sur	16	Poor to no survival, drought.
2125-76	Cal Clark	17	Hanford	Trover-Kimberlina	8	Excellent growth and spread from seed.
2131-76	Code Fisheries	16	Auburn	San Joaquin	16	No survival from seed.
2194-78	J. Peters Babcock	16	H. riposa	Auberry	30	Did not survive drought.
2195-78	G.B. Slackmore	17	Colusa	Columbia	16	Oid not survive competition.
2198-78	C. Faure	17	Visalia	San Joaquin	10	Did not survive grazing.
2212-78	U.S. Fish & Wildlife	17	Corning	Willows	18	Did not survive competition.
2223-78	Nat. Wildlife Refuge	17	Colusa	I.Jillows-Capay	16	Excellent survival of plants.
2236-76	R. Noel	20	Santa Maria	Santa Lucia Lopez	22	No survival
2250-76	Cal Clark	17	Hanford	Kimberlina	8	Fair survival with no irrigation.
2257-78	M. Blasingame	18	Fresno	Tivy	18	Fair stand from seed. Some irrigation.
2262-79	J. Woodward	15	Gilroy	Gaviota/ Los Gatos	20	Did not survive severe grazin']].
2275-79	B. Davis	20	Santa Maria	Kettleman/ Pleasanton	12	Fair survival fro seed.
2283-79	J. Fell	15	San Jose	Gaviota/ Los Gatos	20	Failed due to care, drought.
2294-79	Union Oil Co.	17	Fresno	Panache	7	No survival tro seed.
2317-79	W. Morgan	15	Concord	Dibble	17	Failure. No weed control.
2327-79	Corps of Engine rs	1	Madera	Ahwahne	12	No survival.
2341-79	C. Kettleman	17	Sacramento	San Joaquin	18	No survival.
2344-80	C. Underwood	19	Somis	Pincon	15	Poor survival from cuttings•

No.	Landowner	MLRA	<u>EO</u>	Soils	Rainfall	Performance
2391-30	J Donatod.	15	San Jose	San Ysidro Vallecitos	15	Plants did not survive grazing.
2401-31	R. W idman	17	Hanford	Cajon	8	Failure.
2454-81	Camanche Hills Hunting Club	17	Jackson	Unknown	20	Wildfire killed plants.
-2.;55-31	Fields	17	Livermore	Yolo	16	Plants did well Some irri9ation.
2472-82	USOI-NWR	30	Blythe	Unnamed	3	Fair stand, cattle grazed.
2510-82	Calif. Fish & G3e	19	Hemet	Willows	17	Fair survival.
2538-83	R. lartella	17	Hanford	Nord	7	Good initial establishment. Soma irrigation.
2570-83	Calif. Fish & Geme	14	Paso Robles	Mqtz, Tijunga Sorrento, Noe	7	Fair survival from plants.
2571-83	a. Bergquist	14	Paso Robles	Arbuckle-PoSit as	5	Only 1 plant from seed. Fair survival plants.
2624-84	U.S.F.S.	1B	Visalia	Shaver-Tollhouse	22	Fair initial survival.
2625-84	E. Stewart	15	Corning	Meyers	24	Did not survi.ve gras" Shoppers.
2626-84	M.. Lower	15	Los Banos	Orognen- Quiensable	8	Plants destroyed by rodents and livestock.
2657-84	B.. Roden	15	Bakersfield	Polonio	6	No germ first year.
2658-84	B. Roden	15	Bakersfield	Polonio	6	Fair survival with irrigation.
2701-85	Westlands Water Dist.	17	Fresno	Panoche	6	Just planted.