## LAND SUITABILITY **FURROW IRRIGATION OF CAPSICUM** FURROW IRRIGATION OF SUGAR-CANE SOILS DEPARTMENT OF PRIMARY INDUSTRIES Scale in Kilometres 10 0 10 20 30 40 50 SHOWN IN FULL AT THE SOUTH WEST CORNER OF THE MAP. **Transverse Mercator Projection** INTENSITY STATEMENT This is a high intensity soils survey. It is based on aerial photograph interpretation and ground observations of the order of one observation to an area of 6 hectares. LOCALITY MAP SURVEY by N.G. Christianos, Land Resources Branch, Department of Primary Industries, Ayr. CARTOGRAPHY by D.O. Gooding, Land Resources Branch, Department of LOW VOLUME IRRIGATION OF MANGOES Primary Industries, Brisbane BASE MAP compiled from the 1:25 000 Topographic Series supplied by the Department of Lands, and reproduced with the permission of the Surveyor General, Brisbane. PRINTED by GOPRINT, Brisbane, 1992 © QUEENSLAND GOVERNMENT, 1992 **FURROW IRRIGATION OF MAIZE** Transverse Mercator Projection REFERENCE Great Soil Group Major Attributes of Dominant Soil+++ **Great Soil Group** Major Attributes of Dominant Soil++ Major Attributes of Dominant Soil+\*\* SOILS OF MISCELLANEOUS ALLUVIAL LANDFORMS (Continued) SOILS OF THE BURDEKIN RIVER ALLUVIAL PLAIN (Continued) Great Soil Group Major Attributes of Dominant Soil+++ SOILS OF THE BURDEKIN RIVER ALLUVIAL PLAIN A. SOILS PRIMARILY OF RELLICT ALLUVIAL LANDFORMS SLIGHTLY ELEVATED FLATS LOW LYING FLATS 0.05-0.1 m brown-mottled grey to brown clay loam A1 horizon over Solodic-solodized Weakly self mulching to hard setting surface over frequently (Bleached)\* grey clay -0.1-0.2 m dark to brown sandy loam to sandy clay loam A1 horizon Solodic-solodized bleached A2 horizon to 0.12-0.2 m over grey to dark medium to solonetz bleached, brown-mottled grey light to light medium clay to B. SOILS OF BARRATTA CREEK ALLUVIAL LANDFORMS over bleached A2 horizon to 0.15-0.3 m over brown-mottled brown to solonetz heavy clay B horizon to 0.9-1.2 m over brown light to medium clay D 0.05-0.2 m over brown-mottled grey medium clay to 0.8-1.2 m over LEVEES, FLOODOUTS AND FANS grey medium clay B horizon to 1.15-1.3 m over brown to red-brown horizon to 1.5+ m, strongly alkaline above or at 0.6 m. grey to brown medium clay to 1.5+ m, neutral throughout or alkaline sandy clay loam to light medium clay D horizon to 1.5+ m, alkaline at 0.2-0.3 m dark to grey loam to sandy clay A1 horizon over brown to No suitable group to strongly alkaline at and below 0.9 m. Normal gilgai, 0.05-0.3 m Dd1.33 0.05-0.12 m brown-mottled dark to brown clay loam A horizon yellow-brown loam to sandy clay A2 or A3 horizon to 0.2-0.6 m over bleached throughout or near base over dark to brown medium clay B solonetz neutral brown to dark clay loam to light clay to 0.6-1.2 m over neutral 0.1-0.25 m dark to grey clay loam A1 horizon over bleached A2 Solodic soil horizon to 0.9-1.2 m over dark-mottled brown to yellow-brown light to to alkaline yellow-brown to yellow clay loam to light clay to 1.5+ m. Weakly self mulching to hard setting surface over bleached, brown- (Bleached) grey clay Dy2.33 horizon to 0.3-0.4 m over alkaline grey light medium to medium clay medium clay D horizon to 1.5+ m, strongly alkaline at and below mottled grey light to light medium clay to 0.1-0.25 m over brown-B horizon to 0.75-0.95 m over brown to yellow-brown sandy loam to 0.15-0.35 m dark to grey clay loam A1 horizon over bleached A2 No suitable group mottled grey to yellow-brown medium to heavy clay to 0.9-1.25 m light medium clay D horizon to 1.5+ m. horizon to 0.25 - 0.5 m over alkaline dark to grey light clay B horizon over grey to brown light medium to medium clay to 1.5+ m, strongly 0.05-0.12 m brown-mottled grey to brown clay loam A horizon Solodic-solodized alkaline at and below 0.9-1.2 m. Normal gilgai, 0.1-0.3 m vertical 0.1-0.4 m dark to grey loamy sand to sandy loam A1 horizon over Yellow podzolic soil bleached throughout or near base over grey medium to heavy clay B solonetz bleached, yellow-mottled grey to yellow-brown loamy sand to sandy horizon to 0.65-1.3 m over brown light to medium clay D horizon to 0.1-0.2 m dark to brown sandy loam to clay loam A1 horizon over Brown podzolic soil loam A2 horizon to 0.6-1.2 m over acid to neutral red or grey-mottled 1.5+ m, strongly alkaline at and below 0.3 m. bleached A2 horizon to 0.2-0.4 m over neutral brown to yellow-brown Weakly self mulching to hard setting surface over trequently yellow to yellow-brown sandy clay to medium clay B horizon to light medium to medium clay B horizon to 0.9-1.5+ m over brown to bleached, brown-mottled grey light to light medium clay to 0.1-0.2 m brown clay -Linear gilgai complex. Vertical interval of gilgai less than 0.05 m, 2Ddc-2Ugi yellow-brown sandy loam to sandy clay loam D1 horizon to over brown-mottled grey to brown medium to heavy clay to 0.8-1.3 m grey clay 1.4-1.5+ m over brown to grey light to light medium clay D2 horizon Ug5.24 over grey to brown light to medium clay to 1.5+ m, strongly alkaline 0.15-0.3 m dark to brown loamy sand, sandy loam or sandy clay Soloth-solodic soil above or at 0.6 m. Normal gilgai, 0.05-0.3 m vertical interval. loam A1 horizon over bleached, grey to yellow-brown loamy sand to <u>Depression</u> 2Ddc: 0.05 - 0.2 m brown-mottled dark clay loam A1 Solodic-solodized sandy loam A2 horizon to 0.3-0.6 m over acid to neutral yellowrizon over bleached A2 horizon to 0.2-0.35 m over strongly 0.05-0.15 m brown-mottled dark to brown loam to clay loam A1 Red-brown earth 0.01-0.02 m moderate self mulch over uniform brown-mottled grey Grey clay mottled yellow-brown to grey sandy clay to medium clay B horizon to alkaline dark to grey medium to heavy clay B horizon to 0.8-1.2 m horizon over bleached A2 horizon to 0.1-0.2 m over alkaline redmedium to heavy clay to 1.5+ m, neutral throughout or alkaline to Ug5.24 0.6-1.4 m over sandy loam to medium clay D horizon to 1.5+ m. over grey to brown medium to heavy clay B horizon to 1.0-1.4 m mottled brown medium clay B horizon to 0.55-0.7 m over brown to strongly alkaline at 1.2-1.5 m. Normal gilgai, 0.1-0.3 m vertical over red-brown to yellow-brown light medium to medium clay D grey loamy sand to light medium clay D horizons to 1.5+ m. Dy3.32 0.15-0.4 m dark to grey loam to clay loam A1 horizon over bleached Yellow podzolic soil horizon to 1.5+ m. A2 horizon to 0.45-0.8 m over neutral red-mottled yellow to brown 0.01-0.02 m moderate self mulch over uniform brown-mottled grey Grey clay VARIANTS AND PHASES (SUFFIXES) medium clay B horizon to 1.5+ m. Db2.32 Mound 2Ugi: 0.01-0.02 m moderate to strong self mulch over grey Grey clay-brown clay Ug5.29 medium to heavy clay to 1.2-1.4 m over yellow-brown to grey to brown medium to heavy clay to 0.1-0.2 m over strongly alkaline medium to heavy clay to 1.5+ m, strongly alkaline at and below Buried soils or D horizons of contrasting or coarser texture underlie the modal soil type at 0.1-0.2 m brown-mottled grey to dark loam to clay loam A1 horizon Yellow podzolic soil grey to brown medium to heavy clay to 1.0-1.3 m over brown depths less than 1.5 m or at depths less than that specified in the major attributes. 0.6-0.9 m. Normal gilgai, 0.1-0.3 m vertical interval. over bleached A2 horizon to 0.2-0.4 m over neutral red-mottled medium clay D horizon to 1.5+ m. yellow-brown medium clay B horizon to 0.9-1.2 m over red to red-Significant variation in depth or field texture of A horizon to that of the modal soil type. 0.01-0.02 m moderate to strong self mulch over brown-mottled grey Grey clay brown sandy clay to medium clay D horizon to 1.5+ m. medium to heavy clay to 0.1-0.15 m over grey medium to heavy clay 0.2-0.4 m brown-mottled grey to dark sandy loam to light sandy clay Solodic-solodized to 1.0-1.5+ m over brown medium to heavy clay to 1.5+ m, strongly Significant variation in colour of B horizon to that of the modal soil type. SOILS OF THE GENTLY UNDULATING RISES ON ACID INTRUSIVE ROCKS, PEDIMENTS AND PRIOR STREAMS alkaline at and below 0.3 m. Normal gilgai, 0.1-0.3 m vertical loam A1 horizon over bleached A2 horizon to 0.3-0.8 m over alkaline solonetz red-mottled yellow-brown to yellow sandy clay to medium clay B Vertical interval of gilgai significantly different from that of the modal soil type. INTENSITY STATEMENT This assessment uses the results of a high intensity soil survey. The soil survey was based 0.1-0.3 m dark to brown coarse sand to sandy loam A1 horizon over No suitable group, horizon to 1.5+ m. Barratta, clay 0.05-0.1 m brown-mottled dark to brown clay loam A1 horizon over Solodic-solodized Areas affected by severe erosion. bleached A2 horizon to 0.4 - 0.9 m over acid grey to yellow-brown affinities with podzol on aerial photograph interpretation and ground observations of the order of one observation Dv3.43 bleached A2 horizon to 0.12-0.25 m over alkaline brown-mottled grey solonetz 0.1-0.25 m grey to dark loam to clay loam A1 horizon over bleached Solodic-solodized coarse sand to sandy loam B horizon to 1.0-1.5+ m, over coarse to an area of 6 hectares. medium to heavy clay B horizon to 0.9-1.3 m over brown light A2 horizon to 0.25-0.5 m over alkaline red-mottled brown to yellow-solonetz sand or hard rock C horizon to 1.5+ m. Areas which are subject to seasonal inundation and require drainage and reclamation medium clay D horizon to 1.5+ m. Normal gilgai, 0.1-0.25 m vertical brown medium clay B horizon to 1.0-1.5+ m over brown to red-brown sandy clay to light medium clay D horizon to 1.5+ m. SOILS OF MISCELLANEOUS ALLUVIAL LANDFORMS SLIGHTLY ELEVATED FLATS REFERENCE A. SOILS PRIMARILY OF RELLICT ALLUVIAL LANDFORMS Within areas of intense soil variability, the mapping unit is a soil complex and is 0.05-0.1 m grey to dark loam to clay loam A1 horizon over bleached Solodic-solodized LEVEES, FLOOD-OUTS AND FANS 0.05-0.15 m dark to brown clay loam A1 horizon over bleached A2 Solodic-solodized named after the two most frequently occurring soil types, for example 2Ugd-2Dbc. A2 horizon to 0.1-0.2 m over strongly alkaline frequently brownhorizon to 0.12-0.2 m over brown medium clay B horizon to Suitable land with negligible limitations mottled grey to yellow or brown medium to heavy clay B horizon to 0.2-0.3 m dark to grey to brown coarse sand to sandy loam A1 No suitable group, 0.85-1.15 m over brown to red-brown fine sandy clay to light medium Series name as defined in Hubble and Thompson (1953). horizon over bleached A2 horizon to 0.5-0.6 m over acid to neutral affinities with siliceous Uc2.22 0.7-1.2 m over brown-mottled yellow-brown to red-brown clay loam clay D horizon to 1.5+ m, strongly alkaline at and below 0.6 m. frequently brown-mottled yellow-brown to brown coarse sand to sand or earthy sand Uc3.21 to medium clay D horizon to 1.5+ m. Values of attributes are described in terms of the dominant values in this area only. Suitable land with slight limitations sandy loam B horizon to 1.5+ m. 0.1-0.2 m dark to grey loam to clay loam A1 horizon over bleached Solodic-solodized The full range of values within each soil type in the Lower Burdekin Valley does not 0.02-0.15 m dark to grey sandy loam to clay loam A1 horizon over Solodic-solodized A2 horizon to 0.2-0.35 m over brown-mottled grey or dark medium solonetz bleached A2 horizon to 0.05-0.2 m over frequently brown-mottled solonetz necessarily occur in this area. 0.2-0.4 m dark clay loam A horizon over neutral to alkaline brown to No suitable group, Suitable land with moderate limitations clay B horizon to 0.7-1.5+ m over brown to yellow-brown fine sandy grey to yellow-brown or dark light medium to medium heavy clay B dark light to medium clay B horizon to 0.6-0.7 m over brown sandy affinities with prairie soil Db1.12 Variants and phases of soil types may occur, for example 2Dbc2, 2UgfW. Such mapping clay to light medium clay D horizon to 1.5+ m, strongly alkaline at horizon to 1.0-1.5+ m over brown-mottled grey-brown to yellow-grey clay loam to medium clay D horizon to 1.5+ m. sand to medium clay D horizon to 1.5+ m, strongly alkaline at and units are described by the major attributes of the modal soil type modified by the and below 0.9-1.2 m. lass 4 Currently unsuitable land description of the variant or phase concerned. Variants and phases are described below 0.3 m. 0.1-0.2 m brown-mottled dark to brown clay loam A1 horizon over Solodic-solodized separately in the reference. 0.1-0.3 m dark to brown loamy sand to sandy loam A1 horizon over Red podzolic soil bleached A2 horizon to 0.2-0.3 m over grey, dark or brown medium solonetz brown to red-brown loamy sand to sandy loam A2 horizon to 0.6-0.9 CLOSED AND OPEN DEPRESSIONS Class 5 Unsuitable land clay B horizon to 0.7-1.2 m over brown to yellow-brown fine sandy After Stace et al. (1968). "A Handbook of Australian Soils". Bracketed qualifiers are not an m over red-brown sandy clay loam to clay loam A3 horizon to clay to light medium clay D horizon to 1.5+ m, strongly alkaline at established part of great soil group names. Weakly self mulching to hard setting surface over dark to grey light Black earth-grey clay 0.7-1.2 m over acid to neutral red to red-brown clay loam to sandy to light medium clay to 0.05-0.2 m over alkaline dark to grey light to clay B1 or B2 horizon to 1.5+ m. Principal Profile Form (Northcote, 1971). medium clay to 1.0-1.5+ m over grey to brown sandy clay to medium 0.05-0.1 m brown-mottled dark to grey clay loam A1 horizon over Solodic-solodized DISCLAIMER: 0.1-0.2 m dark to grey loam to clay loam A1 horizon over bleached Red podzolic soil clay D horizon to 1.5+ m. bleached A2 horizon to 0.12-0.2 m over brown-mottled grev to brown solonetz This is a scanned image and some detail may be illegible or lost. While every care is MISCELLANEOUS nedium clay B horizon to 1.15-1.25 m over brown light to medium aken to ensure the accuracy of this product, the Department of Natural Resources and Land is classified on the basis of a specified land use which allows optimul 0.1-0.15 m dark to brown clay loam A1 horizon over bleached A2 Solodic-solodized to red-brown light medium to medium clay B horizon to 1.5+ m. clay D horizon to 1.5+ m, strongly alkaline at and below 0.9-1.2 m. Mines makes no representations or warranties about its accuracy, reliability production with minimal degradation to the land resource in the long term. horizon to 0.15-0.25 m over alkaline dark medium clay B horizon to solonetz Soil sampling sites. Dr3.43 Dr3.33 completeness or suitability for any particular purpose and disclaims all responsibility and Current technology and management are assumed and the land was assessed 6Drc 0.1-0.2 m dark to grey loam to clay loam A1 horizon over bleached Solodic soil 0.7-1.1 m over dark to grey to brown light medium clay D horizon to 0.05-0.1 m brown-mottled grey to brown clay loam A horizon all liability (including without limitation, liability in negligence) for all expenses, losses, as it was found at the time of the survey. Unique map area (UMA) number. A2 horizon to 0.2-0.5 m over alkaline frequently yellow-mottled redbleached throughout or near base over grey medium to heavy clay B solonetz damages (including indirect or consequential damage) and costs which you might incur brown to red medium clay B horizon to 1.0-1.35 m over red-brown to horizon to 1.15-1.5+ m over brown light to light medium clay D as a result of the product being inaccurate or incomplete in any way for any reason. brown fine sandy clay to medium clay D horizon to 1.5+ m. horizon to 1.5+ m, strongly alkaline at and below 0.6 m.