# LAND SUITABILITY MAP

# CASSAVA

# LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS

## PROVINCE OF ZAMBOANGA SIBUGAY





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# LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS PROVINCE OF ZAMBOANGA SIBUGAY



# LAND SUITABILITY MAP FOR **CASSAVA**

# LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS ZAMBOANGA SIBUGAY, REGION IX

#### EXTENT OF SUITABILITY FOR CASSAVA PRODUCTION BY MUNICIPALITY

		EXISTING CASSAVA (Ha)		TOTAL EXISTING AREA (Ha)	EXPANSION AREA (Ha)						CONFLICT RESOLUTION AREA (Ha)				TOTAL		
MUNICIPALITY	EXISTI				Coc	onut	Shrub unman	,	Grass unman	•	Co	rn	Paddy non-irr		Other o	crops	POTENTIAL EXPANSION AREA (Ha)
	<b>S1</b>	S2	<b>S</b> 3		<b>S1</b>	<b>S2</b>	<b>S1</b>	S2	<b>S1</b>	<b>S2</b>	<b>S1</b>	S2	<b>S1</b>	<b>S2</b>	<b>S</b> 1	<b>S2</b>	AKEA (IIa)
ALICIA		_	-	-	1,399	4,522	66	356	300	470	778	1,534	-	-	-	-	9,426
BUUG	-	-	-	-	901	3,141	77	608	20	691	577	436	-	_	2	-	6,453
DIPLAHAN		_	-	-	186	664	74	363	11	565	1,377	471	-	-	3	-	3,714
IMELDA	-	-	-	-	322	2,686	8	65	51	369	428	261	-	_	1	-	4,192
IPIL	-	<u>-</u>	-	-	2,819	2,577	259	78	47	246	2,030	674	-	-	-	4	8,734
KABASALAN	-	-	-	-	1,238	2,535	3	349	8	733	448	390	-	_	-	-	5,704
MABUHAY	-	_	-	-	423	2,823	-	79	-	93	302	1,781	-	-	-	-	5,501
MALANGAS	-	-	-	-	2,191	3,633	32	78	22	545	1,055	582	-	-	2	1	8,140
NAGA	-	-	-	-	2,075	4,286	24	17	20	139	484	435	-	-	-	-	7,480
OLUTANGA	-	_	-	1	131	3,080	-	78	-	78	9	1,510	-	-	-	-	4,887
PAYAO	-	-	-	-	1,114	5,549	151	426	7	452	1,125	1,451	-	_	22	35	10,332
ROSELLER LIM	-	-	-	-	1,534	4,134	58	69	416	669	1,247	927	-	_	-	-	9,055
SIAY	-	-	-	-	410	2,855	144	446	89	1,372	2,140	454	-	_	-	-	7,910
TALUSAN	-	_	-	-	151	1,813	18	122	-	122	132	1,689	-	-	-	1	4,048
TITAY	-	_	-	-	4,436	7,320	102	25	118	200	1,295	854	-	-	-	-	14,349
TUNGAWAN		-	-	-	2,800	6,747	67	304	1,659	4,296	1,211	1,620	-	-	-	-	18,705
TOTA	AL -	_	_	-	22,130	58,365	1,084	3,462	2,769	11,040	14,637	15,069	-	-	31	41	128,629

Note: Delivery of cassava planting materials must be started on the onset of rainy season.

\*establishment of shade trees prior to planting of cassava.

- deep to very deep

### AGRONOMIC REQUIREMENT OF CASSAVA PRODUCTION

LAND UTILIZATION TYPE	SUITABILITY RATING	SLOPE (%)	SOIL DEPTH (cm)	SOIL TEXTURE	SOIL DRAINAGE	SOIL REACTION (pH)	INHERENT FERTILITY	FLOODING CLASS	EROSION CLASS	ROCK OUTCROPS	ELEVATION (masl)	ANNUAL RAINFALL (mm)	CLIMATIC TYPE
	S1	<8	>50	FSL, L, SiL, CL, SiCL, SCL, SCL, SC, SiC, C	WD,MWD	5.6 -7.2	high	none-slight	none-slight	none-few	<500	1000-2000	I,II, III, IV
Cassava	S2	8 - 18	30 - 50	SL, HC	SPD, PD	5.1 - 5.5 7.3 - 7.8	medium	moderate	moderate	common	500-1500	2001-4500	II
	S3	18 - 30	<30	S, LS, CSL	VPD,ED	<5.0 - > 7.9	low	severe	severe	many	>1500	<1000	

>4500 **SOIL DRAINAGE** SOIL REACTION (pH) **SOIL TEXTURE** SLOPE (%) ED excessively drained - extremely acid - level to gently sloping Coarse - gently sloping to undulating WD - well drained very strongly acid - sandy clay - undulating to rolling - moderately well drained 5.1 - 5.5 - strongly acid loamy sand silty clay - somewhat poorly drained 5.6 - 6.0 18 - 30 - rolling to moderately steep - medium acid - coarse sandy loam - clay 30 - 50 - poorly drained 6.1 - 6.5 - slightly acid heavy clay - sandy loam VPD 6.6 - 7.2 - neutral > 50 very poorly drained very steep 7.3 - 7.8 - mildly alkaline - fine sandy loam **SURFACE IMPEDIMENT** - loam SOIL DEPTH (cm) - moderately alkaline very shallow ROCK OUTCROPS - strongly alkaline - silt loam 30 - 50 - none - few - clay loam moderately deep 10 - 30% - common - silty clay loam > 30%

LAND LIMITATIONS DESCRIPTION AND COMBINATIONS								
ELEVATION	SOIL DRAINAGE	SOIL DEPTH	SOIL EROSION					
El2 - 500 - 1000m or 2000 - 2500m	D2 - Somewhat poorly drained to poorly drained	Sh2 - Shallow to moderately deep (30 - 100cm)	E2 - Moderate erosion					
El3 $-<500 \text{m or} > 2500 \text{m}$	D3 - Very poorly drained or excessively drained	Sh3 - Very shallow (< 30cm)	E3 - Severe erosion					
SLOPE/TOPOGRAPHY	SOIL TEXTURE	ROCK OUTCROPS	FLOODING					
T2 - Undulating to moderately steep	Tc - Coarse texture	Rc2 - Common	F2 - Moderate seasonal flooding					
T3 - Steep to very steep		Rc3 - Many	F3 - Severe seasonal flooding					

CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION
1	El2	11	T3	21	T3-El2-E3-Sh2-Rc2	31	T3-El2-E3-Sh3-Rc3
2	F2-D2	12	T3-E3	22	T3-El2-E3-Sh2-Rc3	32	T3-E13
3	F3-D2	13	T3-E3-Rc2	23	T3-El2-E3-Sh3-Rc2		
4	Sh2-Rc2	14	T3-E3-Rc3	24	T3-E12-E3-Sh3-Rc3		
5	T2	15	T3-E3-Sh2-Rc2	25	T3-F2-D2		
6	T2-E2-Sh2-Rc2	16	T3-E3-Sh2-Rc3	26	T3		
7	T2-El2	17	T3-E3-Sh3-Rc2	27	Т3-Е3		
8	T2-El2-Sh2-Rc2	18	T3-E3-Sh3-Rc3	28	T3-E3-Rc3		
9	T2-El2-Sh2-Rc3	19	T3-E12	29	T3-E3-Sh3-Rc3		
10	T2-F2-D2	20	T3-El2-E3	30	T3-El2-E3		

CODE	LANDUSE	CODE	LANDUSE
4	Corn	137	Rubber
81	Coffee	139	Falcata
82	Cacao		
85	Mango		
91	Banana		
105	Fruit trees, mixed		
115	Mixed crops		
116	Coconut		
126	Grassland		
134	Shrubs, unmanaged		

- sandy clay loam

### **SUITABILITY CLASSES:**

Highly Suitable (S1) Land having no significant limitation to sustained application of a given use, or only minor limitations that will not significantly reduce productivity or benefits and will not raise inputs above an acceptable level.

Land having limitations which in aggregate are severe for sustained application of a given use and will so reduce productivity or benefits, or increase required inputs, that this expenditure will be only marginally justified.

Marginally Suitable (S3)

**Moderately Suitable (S2)** Land having limitation which in aggregate are moderately severe for sustained application of a given use; the limitation will reduce productivity or benefits and increase required inputs to the extent that the overall advantage to be gained from the use, although still attractive, will be appreciably inferior to that expected on class S1 land.

**Not Suitable / Not Relevant** Land having limitations which may be surmountable in time but which cannot be corrected with existing knowledge at currently acceptable cost; the limitations are so severe as to preclude successful sustained use of the land in the given manner. Existing forest, shrubland greater than 18% slope, irrigated paddy rice and miscellaneous land types such as built up areas, roads, etc are considered as not relevant.

### **CLIMATE TYPE**

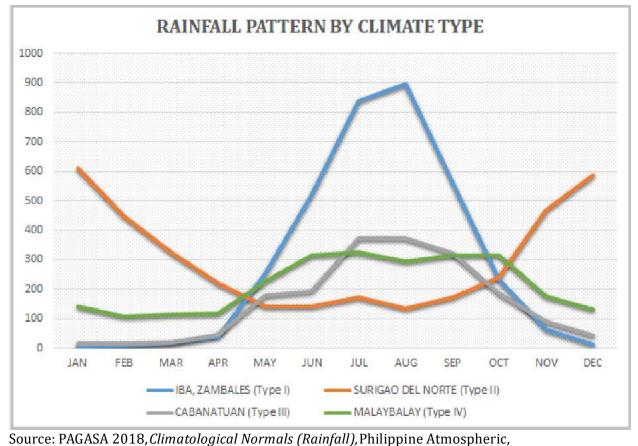
wet during the rest of the year. Maximum rain period is from June to September

**TYPE I**: Two pronouced season, dry from November to April and **TYPE II**: No dry season with a very pronounced maximum rain period from December to February. There is not a single dry month. Maximum monthly rainfall occurs during the period from March to May.

**TYPE III**: No very pronounced maximum rain period, with a dry season lasting only from one to three months, either during the period from December to February or from March to May. This type resembles Type I since it has a short dry season.

**TYPE IV**: Rainfall is more or less evenly distributed throughout the year. This type resembles Type II since it has no dry

Western part of Zamboaga Sibugay is classified as climatic Type III and Eastern part is Type IV.



Geophysical and Astronomical Services Administration (PAGASA), accessed 27 July 2018, <a href="https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals</a>.

