Soil Mapping and Advisory Service Project BOT/85/011

PRELIMINARY LAND SUITABILITY MAP FOR SORGHUM - SOUTH EAST DISTRICT

FAO / UNDP / GOVT. OF BOTSWANA

Note : Topography based on Department of Surveys & Lands 1 : 50 000 Sheet Numbers 2425 D1, D2, D3, D4, 2426C1, 2525 B1, B2, B3.

LAND SUITABILITY
FOR
IMPROVED TRADITIONAL DRYLAND FARMING

Main crop: Sorghum

Suitability class		Area coverage per mapping unit (%)
☐	**S1**	60 - 80
☐	S1	40 - 60
☐	s1	20 - 40
☐	**S2**	60 - 80
☐	S2	40 - 60
☐	s2	20 - 40
☐	**S3**	60 - 80
☐	S3	40 - 60
☐	s3	20 - 40
☐	**S4**	60 - 80
☐	S4	40 - 60
☐	s4	20 - 40
☐	**N1**	60 - 80
☐	**N2**	60 - 80

S1 **Highly suitable**: Land which is expected to be highly productive for the defined use. High returns amply justify required inputs. No significant limitations.

S2 **Moderately suitable**: Land which is expected to be moderately productive for the defined use. Moderate returns justify required inputs. Limitations reduce crop yield 20 - 40% and/or increase recurrent costs for production and conservation.

S3 **Marginally suitable**: Land which is expected to have a low productivity for the defined use. Yield benefits are just high enough to justify required inputs. Limitations reduce crop yield 40 - 60% and/or considerably increase costs for production and conservation.

S4 **Very marginally suitable**: Land which is expected to have a very low productivity for the defined use. It is doubtful whether yield benefits alone justify required inputs. Severe limitations reduce crop yield 60 - 80% and/or considerably increase costs for production and conservation.

N1 **Currently unsuitable**: Land with very severe limitations, which at the present can not be corrected economically.

N2 **Permanently unsuitable**.

Land suitability subclasses (limitations)

Edaphic and agro-climatic suitability
(**c**) correct temperature regime, day length and air humidity
(**f**) absence of damaging floods
(**g**) adequacy of conditions for germination
(**m**) moisture availability
(**n**) nutrient availability
(**o**) oxygen availability in the root zone
(**r**) adequacy of foothold for roots
(**t**) absence of toxic substances

Management and conservation suitability
(**a**) accessibility
(**e**) resistance to soil erosion
(**w**) workability

The land suitability subclasses refer to the suitability of the land for sorghum as the main crop of a farming system, which includes a variety of other crops such as: millet, maize, cowpeas, water melon and fodder (Dolichos lablab).

The suitability of maize can generally be considered as one class lower as compared to sorghum, while the other crops are generally one class higher.

It should be noted that tractors are considered as draft power.