

Better Management Practice	<p>Conservation structures are in place to minimise soil erosion</p> <ul style="list-style-type: none"> • All land over 2% slope is protected by conservation structures • Panel widths do not exceed specifications for slopes • Highly erodible soils are protected by conservation structures on slopes over 1.5% • Broad-based contour banks are constructed on slopes of up to 12% • On slopes steeper than 12% improved bench contour banks are constructed • Conservation structures do not exceed 300m in length on weak (sandy) soils, or 400m on good (clay) soil • Conservation structures are kept free from silt and debris where necessary • Conservation structures have been checked on plough-out for line, level and grade • Conservation structures are stabilised through a suitable vegetative cover • Conservation structures (to discharge water from selected crestlines, across the slope, to selected waterways) should have acceptable accelerating gradients 	<p>Contour banks (refer to Page 3-54: Diagram of Conservation Works)</p> <ul style="list-style-type: none"> • A total surface water management plan is a basic requirement in a Land Use Plan. • Contour banks used in conservation agriculture are hydraulically designed structures placed in the field to protect the land situated immediately below. Spacing is influenced by slope, soil and management practices. Acceptable standards are calculated using the universal soil loss equation (USLE) and are determined using the SASRI Nomograph, a tool developed by SASRI in collaboration with the DAEA (now known as DARD), to determine contour bank spacing for land use planners. • Panel widths should not exceed 60m on slopes <12%, 45 m on slopes 12-20% and 30 m on slopes 20-30%. • All land over 2% slope must be protected by conservation structures (refer to DAEA publication, Conservation of Farm land in Kwazulu-Natal, ISBN 1-86871-029-7). For sugarcane, specific designs may apply for those slopes <4% such as in the irrigated areas where parallel conservation structures are used. • Parallel layout, i.e. the structures are parallel to one another: This system is ideal for surface water management on irrigated farms and may incorporate the irrigation design into the layout. Often this type of design needs to consider the safe removal of water from flat irrigated land to prevent in-field ponding. The parallel system may require more waterways than normal, and in many instances the structures (contour banks) may act as artificial waterways. • Lands consisting of soil classified as highly erodible should be protected by conservation structures on slopes over 1.5%. • Broad-based contour banks should be constructed on slopes of up to 12%, and may be planted over provided cane row alignment is parallel to the contour. On slopes steeper than 12%, improved bench contour banks should be constructed (refer to Page 3-54: Diagram of Conservation Works). • Conservation structures will discharge water from selected crest lines, across the slope, to selected waterways. • These structures should have accelerating gradients ranging from 1:300 to 1:100, i.e. clay soil 1:100, loam soils 1:200, sandy soils 1:300. The gradient of the last 20 m of the conservation structures should be increased to ensure that the discharge of water into the waterway is accelerated. • Conservation structures should not exceed 300 metres in length on weak (sandy) soils and 400 metres on good (clay) soils. • Conservation structures must be kept free from silt and debris and, especially during the first two seasons, should be checked for line, level and grade. • Conservation structures must be maintained, and may require periodic re-establishment.
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