

Module 3.10 SOIL CONSERVATION: LAYOUT		STATEMENT OF INTENT Soil erosion is minimised
Measures		Notes
Legal requirement	<p><b><i>Compliance with Regulations published under the Conservation of Agricultural Resources Act 43 of 1983 to minimise soil erosion</i></b></p> <p><b>Cultivation of new land:</b></p> <ul style="list-style-type: none"> <li>• Except with written authority, no virgin land has been cultivated</li> <li>• Except with written authority, no land has been cultivated if it has a slope of more than 20%</li> <li>• Except with written authority, no land has been cultivated if it has a slope of more than 12%, and is situated in certain magisterial areas</li> </ul> <p><b>For EXISTING conditions:</b></p> <ul style="list-style-type: none"> <li>• Maximum slope limits are adhered to according to the soil erodibility rating in KZN</li> <li>• There should be no signs of visible erosion</li> </ul>	<p><b>Regulations under the Conservation of Agricultural Resources Act</b></p> <p>Farmers must comply with the Regulations published under section 29 of the Conservation of Agricultural Resources Act as amended in 2001.</p> <p>NB: The Better Management Practices developed for sugarcane are designed to meet the requirements of the Conservation of Agricultural Resources Act. In most circumstances, farmers who implement the BMPs would meet the general requirements of the Regulations.</p> <p><b>Cultivation of land:</b></p> <ul style="list-style-type: none"> <li>• Except with written authority, no virgin land shall be cultivated (land which in the opinion of the executive officer has at no time during the preceding ten years been cultivated).</li> </ul> <p><b>Cultivation of land with slope:</b></p> <ul style="list-style-type: none"> <li>• Except with written authority, no land shall be cultivated if it: <ul style="list-style-type: none"> <li>- has a slope of more than 20%; or</li> <li>- has a slope of more than 12%, and is situated in certain magisterial areas, with specified erodible soils and physical properties (the magisterial districts of Eshowe, Alexandria, Albany, Bathurst and East London.)</li> </ul> </li> </ul> <p>NB: This prohibition does not apply to land which was under cultivation on the date of commencement of the regulations (<i>viz.</i> 1 June 1984), provided such land is protected against excessive soil loss due to erosion through the action of water</p>

Legal requirement		<b>Norms for upper slope limits on sugarcane land.</b>																																				
		The Department of Agriculture and Rural Development (DARD) (previously known as the DAEA) applies upper slope limits for the cultivation of sugarcane in KwaZulu-Natal. The table below describes the land preparation and conservation practices that are required for the various maximum slope % according to soil erodibility. This information is considered in respect of permit applications for planting sugar cane on virgin soil.																																				
		<table><tr><th>Soil erodibility rating</th><th>High</th><th>Moderate</th><th>Low</th></tr><tr><th>USLE K value</th><th>0.9 - 0.4</th><th>0.4 – 0.2</th><th>0.2 – 0.1</th></tr><tr><th>Land preparation and conservation practices</th><th colspan="3">Maximum slope %</th></tr><tr><td>1. Conventional tillage with conservation structures, cane residue burnt and tops scattered.</td><td>10</td><td>15</td><td>20</td></tr><tr><td>2. Conventional tillage with conservation structures and full green cane harvesting.</td><td>15</td><td>20</td><td>25</td></tr><tr><td>3. Conventional tillage, strip plant, with spill over roads and full green cane harvesting.</td><td>15</td><td>20</td><td>25</td></tr><tr><td>4. Minimum tillage with conservation structures, cane residue burnt and tops scattered.</td><td>20</td><td>25</td><td>30</td></tr><tr><td>5. Minimum tillage with conservation structures and full green cane harvesting.</td><td>25</td><td>30</td><td>30</td></tr><tr><td>6. Minimum tillage, strip plant with spill over roads and full green cane harvesting.</td><td>n/a</td><td>n/a</td><td>30</td></tr></table>	Soil erodibility rating	High	Moderate	Low	USLE K value	0.9 - 0.4	0.4 – 0.2	0.2 – 0.1	Land preparation and conservation practices	Maximum slope %			1. Conventional tillage with conservation structures, cane residue burnt and tops scattered.	10	15	20	2. Conventional tillage with conservation structures and full green cane harvesting.	15	20	25	3. Conventional tillage, strip plant, with spill over roads and full green cane harvesting.	15	20	25	4. Minimum tillage with conservation structures, cane residue burnt and tops scattered.	20	25	30	5. Minimum tillage with conservation structures and full green cane harvesting.	25	30	30	6. Minimum tillage, strip plant with spill over roads and full green cane harvesting.	n/a	n/a	30
	Soil erodibility rating	High	Moderate	Low																																		
	USLE K value	0.9 - 0.4	0.4 – 0.2	0.2 – 0.1																																		
	Land preparation and conservation practices	Maximum slope %																																				
	1. Conventional tillage with conservation structures, cane residue burnt and tops scattered.	10	15	20																																		
	2. Conventional tillage with conservation structures and full green cane harvesting.	15	20	25																																		
	3. Conventional tillage, strip plant, with spill over roads and full green cane harvesting.	15	20	25																																		
	4. Minimum tillage with conservation structures, cane residue burnt and tops scattered.	20	25	30																																		
	5. Minimum tillage with conservation structures and full green cane harvesting.	25	30	30																																		
6. Minimum tillage, strip plant with spill over roads and full green cane harvesting.	n/a	n/a	30																																			
	(Refer to W B Russell “Reducing Rainfall and Runoff Erosion on Cultivated Land” in <i>Conservation of Farmland in KwaZulu-Natal</i> (1998) ISBN 1-86871-029-7)																																					
	Notes: “Conservation structures” = water carrying structures such as contour banks “Full green cane harvesting” implies leaving all residues after harvest The practice of burning, standing cane and spreading the tops does not qualify. If a practice (e.g. full green cane harvesting) is not a tried and accepted method in an area (e.g. Midlands), then it cannot be chosen.																																					