



Assessing Your Pastureland to Protect Water Quality



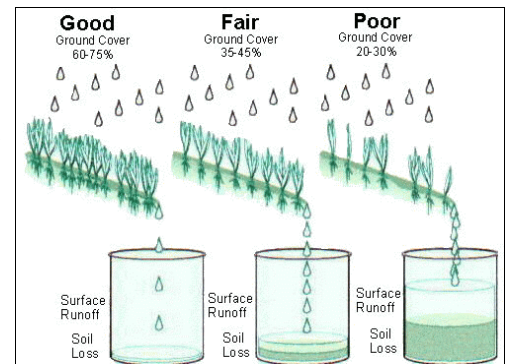
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Good pasture management yields profits while meeting the needs of pasture plants, livestock, and the surrounding environment. Reaching this goal will help ensure that your land and resources are healthy and productive for future generations. Practices that lead to overgrazing and/or allow animals to have unlimited access to surface waters (guts, ponds, beaches) can increase soil erosion and cause water pollution. Other problems include over-application of manure, fertilizers or pesticides. Pasture condition has a direct effect on erosion (soil loss) and stormwater runoff (water loss):

1. **Good pasture condition** – more than 70% ground cover; leads to low erosion rates and low water runoff (the soil absorbs more water).
2. **Poor pasture condition** – less than 30% ground cover: leads to very high erosion rates and high water runoff (the soil absorbs very little rainfall).

Rotational grazing – dividing a larger tract of land into smaller pastures and rotating animals on a frequent basis – can yield up to a 50% increase in the amount of vegetation available to livestock. Stocking rates within these pastures vary according to the slope of the land and the amount of rainfall and vegetation cover. Pastures with steeper slopes, lower rainfall and poorer grass cover can feed fewer animals.



Pasture **over-grazing** reduces forage quality, reduces livestock weight, causes loss of fertile topsoil (leading to the need for fertilizers and other costly amendments in order to establish forage), and compacts topsoil (causing poor water absorption, higher runoff rates and poor forage growth condition). Erosion causes property damage, and pollutes guts, beaches, and coastal waters with **sediment** (eroded soil) that eventually silts-in mangrove lagoons and bays, buries coral reefs and seagrass beds, and damages our fisheries.

Pollution of guts, ponds and coastal waters with **manure** is a human health hazard as well as an environmental problem. When livestock gather in guts and ponds, they deposit manure there also. This waste, especially in guts, washes downhill onto beaches and into coastal waters when it rains, and can cause health risks for people bathing and swimming there. Fish caught in waters polluted with livestock waste can also be contaminated. Livestock also trample the banks of guts and ponds, causing erosion and even leading to bank failure (or collapse). Continued livestock traffic in guts can cause the gut channels to widen, which decreases productive pasture land.

This **risk assessment** will help you to develop practices for your pastures that will:

- < Reduce erosion (conserve soil),
- < Reduce water runoff (conserve water),
- < Improve the quality of your soils, forage and the surrounding environment,
- < Balance plant needs with livestock needs through the use of a **nutrient management plan**, and
- < Control weeds and other pests through an **integrated pest management plan**.



It is a voluntary, confidential assessment of your property designed as part of the VI*A*Syst Program **“Protecting Your Water Through a Home & Farm Assessment.”** Ranking a category “high risk” does not necessarily mean that you are harming your resources, it means that the risk potential is greater. If you have checked areas of high risk, you should complete an **“Action Plan Worksheet”** that builds a plan to reduce your potential risks. The worksheet should list:

- T Activities or structures that you ranked as high risk (“1”),
- T Your response options (whether you can take immediate action to reduce risk or need further planning – major structural improvement, relocation, major effort, or high cost), and
- T The step(s) you will take to address the problem area.



ASSESSING YOUR PASTURELAND



Name: _____

Date: _____

Location: _____

Signature: _____

	Resource Condition			
	Low Risk - 3	Medium Risk - 2	High Risk - 1	Your Rating
Slope	Pastures have low slopes (< 10%).	Pastures have gradual slopes (10 to 25%).	Pastures have steep slopes (> 25%).	
Plant Cover	All pasture fields have good vegetation cover.	Most pasture fields have good or fair vegetation cover.	Pasture lands have poor vegetation cover.	
Pasture Plants	Pastures have a good mix of high protein grasses (guinea, pangola, coastal bermuda) and legumes (young tan-tan or whiss).	Pastures have high protein grasses, but little or no legumes; some weeds are present.	Pastures are weedy with low protein grasses and no legumes.	
Soil Type/Slope	Pastures have deep, well-drained, fairly level soils.	Pasture soils are fairly deep with gradual slopes, medium-textured with some rocks or gravel.	Pasture soils are shallow, steep, and/or rocky or caliche.	
Soil Testing	The soils have been tested for nutrients within the last 3 years.	Most pastures have had a soil test within the last 5 years.	No soil tests have been taken.	
Pasture Layout	All pasture land is sub-divided and animals are rotated frequently between pastures based on vegetation cover and health.	Pastures are subdivided. Livestock are occasionally rotated from one pasture to another.	Pastures are not subdivided, no rotation occurs and most pastures are over-grazed.	
Rainfall Conditions	Pastures are in an area that receives high rainfall (> 45" per year).	Pastures receive moderate rainfall (35" - 45" per year).	Pastures receive low rainfall (< 35" per year).	
Alternative Water Supply	Alternative water supply practices are in place and provide > 15 gpd* for cattle/ horses; > 3 gpd* for sheep/ goats.	Some alternative water supply practices are in place, providing 10-15 gpd* for cattle/ horses; 2-3 gpd* for sheep/ goats.	No alternative water supply practices are in place OR they provide <10 gpd* for cattle/horses; <2 gpd* for sheep/goats.	
Management of Guts/Ponds	Guts and ponds are fenced and protected from grazing.	Some gut/pond areas are protected from grazing.	Livestock have unrestricted access to guts or ponds.	
Pest Control	Weeds, brush, and other pests are controlled using an Integrated Pest Management (IPM; spot treatment, cultural practices, moderate grazing).	Some IPM practices are used.	Weeds, brush, and other pests are uncontrolled.	

* gpd – gallons of water per day per animal.

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