

PASTURELAND

Conservation

Effects

Worksheet



Conservation Effects Worksheet Benchmark Management System

Name: Pastureland Farmer	Address: Georgia
Resource Setting: Endophyte-infected tall fescue pasture (39.5 acres) with low vigor and weeds; livestock access to woodland, stream and natural springs.	Resource Problems Before Treatment: Forage is grazed below the recommended stubble height; no nutrient management plan; lack of warm-season grazing; undeveloped natural springs used for livestock water; muddy areas and weed invasion occurring due to hay and mineral feeding practices; hay feeding requirements are high; bull runs with cows throughout the year
Benchmark: (Present Management System) Continuous stocking, poorly maintained, off-site water quality degraded with sediment and nutrients	
Actions – Present Management (Kinds, amounts and timing)	Effects: (Effects of continuing the benchmark system)
<ul style="list-style-type: none"> ▪ Cow-calf operation ▪ Endophyte-infected tall fescue ▪ Continuous stocking ▪ Grazing below the recommended stubble height ▪ Chicken litter applied without soil test or litter analysis ▪ Cattle have unlimited access to undeveloped, natural springs and a small stream ▪ Stocking rate is 0.63 cow-calf units per acre (1 cow-calf/1.6 acres) ▪ 2 tons of hay are fed per brood cow per year ▪ Cattle are not identified ▪ Cows calve year around ▪ Wildlife Habitat Suitability Index is 0.18 	<ul style="list-style-type: none"> ▪ Pasture species adapted to soil and climate ▪ Cattle exhibit fescue toxicity symptoms ▪ Tall fescue stand in decline due to close, warm-season grazing ▪ Periodic inadequate forage quantity ▪ Undetermined amounts of nutrients applied ▪ Soil pH not known ▪ Weed infestation is becoming more serious each year ▪ Natural springs are becoming mudholes and a source of nutrients and sediment ▪ Water for livestock use is of low quality ▪ Streambank degradation is increasing stream turbidity ▪ Negligible soil erosion ▪ Poor Habitat Suitability Index for wildlife (food and cover) results in infrequent turkey sightings
Comments:	

Conservation Effects Worksheet Treatment Options

Name Pastureland Farmer	Address Georgia	Client ID	Field or Tract No.
Description of Treatment Option (With treatment management system) Pastureland RMS Cow-calf operation. A rotational stocking system consisting of five pastures with a one week average grazing duration is planned. Natural springs and a small stream will be excluded from livestock use. Proper minimum grazing height is observed.			
Treatment Option No. 1		Comparison of Effects of Benchmark and Treatment Option	
Actions – Proposed Management (Kinds, amounts, and timing)	Effects (Effects of conservation treatment)	Impacts	Decisionmaker Evaluation
<ul style="list-style-type: none"> ▪ 382 Fence ▪ 472 Use Exclusion ▪ 512 Pasture Planting ▪ 516 Pipeline ▪ 528A Prescribed Grazing ▪ 561 Heavy Use Area Protection ▪ 575 Animal Trails and Walkways ▪ 590 Nutrient Management ▪ 595 Pest Management ▪ 614 Watering Facility ▪ 642 Water Well ▪ 645 Upland Wildlife Habitat Management 	<ul style="list-style-type: none"> ▪ Stocking rate of 0.72 cow-calf units per acre or excess forage harvested as hay (1 cow-calf/1.4 acres) ▪ 95% calf crop (to weaning) ▪ No-till seeding of orchardgrass and white clover and pasture fertilization at a combined cost of \$130 per acre ▪ 485 lb. average weaning weight ▪ Fencing installed at an average cost of \$0.92 linear foot to create 5 pasture rotation, livestock lane system, and for livestock exclusion ▪ Pipeline (\$0.85 linear foot) and 3 freeze-proof drinkers (\$500 each) installed ▪ Hay fed per cow reduced to 1.38 ton per year 	<ul style="list-style-type: none"> ▪ Stocking rate increased by 15% or excess as hay ▪ Calving percentage increased by 9% ▪ Calves are born within a 90-day time period ▪ Weaning weight increased by 13% ▪ Endophyte-infected tall fescue diluted with orchardgrass and white clover; forage quality improved ▪ Hay requirements reduced by 31% ▪ Surplus hay sold commercially ▪ Forage utilization increased by 43% ▪ Water quality of stream and natural springs protected from livestock access and sedimentation 	

Pastureland – Conservation Effects Worksheet - 3

Name Pastureland Farmer	Address Georgia	Client ID	Field or Tract No.
Description of Treatment Option (With treatment management system) Pastureland RMS Cow-calf operation. A rotational stocking system consisting of five pastures with a one week average grazing duration is planned. Natural springs and a small stream will be excluded from livestock use. Proper minimum grazing height is observed.			
Treatment Option No. 1		Comparison of Effects of Benchmark and Treatment Option	
Actions – Proposed Management (Kinds, amounts, and timing)	Effects (Effects of conservation treatment)	Impacts	Decisionmaker Evaluation
	<ul style="list-style-type: none"> ▪ Hybrid bermudagrass planted & fertilized at a combined cost of \$275/acre ▪ Fencing and livestock exclusion permit growth of vegetation for wildlife habitat (food and cover for turkey) ▪ Heavy use area installed at feeding and watering areas, and in livestock lanes at a cost of \$1.25 sq. ft. ▪ Nutrient expense changes as broiler litter application is decreased and commercial fertilizer is applied ▪ Nutrient management provides proper timing, amount, and kind of nutrients applied ▪ Pests are controlled with mechanical, chemical and/or biological methods ▪ Wildlife Habitat Suitability Index is 0.37 	<ul style="list-style-type: none"> ▪ Warm-season grazing on hybrid bermudagrass ▪ The potential for nutrients entering surface water and groundwater is reduced ▪ Turkey habitat is improved and sightings are increased ▪ Miring and mud hole development in and around frequently, heavily used areas has been eliminated ▪ Livestock are more docile, are more frequently evaluated, and experience fewer health problems ▪ Manure is distributed more uniformly in the pasture system ▪ Livestock are provided cool, clean drinking water ▪ Pasture health and condition is improved ▪ Operation, maintenance, management increase with rotational stocking 	

Pastureland – Conservation Effects Worksheet - 4

Name Pastureland Farmer	Address Georgia	Client ID	Field or Tract No.
Description of Treatment Option (With treatment management system) Pastureland RMS Cow-calf operation. A rotational stocking system consisting of fourteen pastures with a 2 day average grazing duration is planned. Natural springs and a small stream will be excluded from livestock use. Proper minimum grazing height is observed.			
Treatment Option No. 2		Comparison of Effects of Benchmark and Treatment Option	
Actions – Proposed Management (Kinds, amounts, and timing)	Effects (Effects of conservation treatment)	Impacts	Decisionmaker Evaluation
<ul style="list-style-type: none"> ▪ 382 Fence ▪ 472 Use Exclusion ▪ 512 Pasture Planting ▪ 516 Pipeline ▪ 528A Prescribed Grazing ▪ 561 Heavy Use Area Protection ▪ 575 Animal Trails and Walkways ▪ 590 Nutrient Management ▪ 595 Pest Management ▪ 614 Watering Facility ▪ 642 Water Well ▪ 645 Upland Wildlife Habitat Management 	<ul style="list-style-type: none"> ▪ Stocking rate of 0.81 cow-calf units per acre or excess forage harvested for hay (1 cow-calf/1.2 acres) ▪ 95% calf crop (to weaning) ▪ No-till seeding of orchardgrass and white clover and pasture fertilization at a combined cost of \$130 per acre ▪ 485 lb. average weaning weight ▪ Fencing installed at an average cost of \$0.92 linear foot to create 14 pasture rotation, livestock lane system, and for livestock exclusion ▪ Pipeline (\$0.85 linear foot) and 3 freeze-proof drinkers (\$500 each) installed ▪ Hay fed per cow reduced to 1 ton 	<ul style="list-style-type: none"> ▪ Stocking rate increased by 29% or excess as hay ▪ Calving percentage increased by 9% ▪ Calves are born within a 90-day time period ▪ Weaning weight increased by 13% ▪ Endophyte-infected tall fescue diluted with orchardgrass and white clover; forage quality improved ▪ Hay requirements reduced by 50% ▪ Surplus hay sold commercially ▪ Forage utilization increased by 70% ▪ Water quality of stream and natural springs protected from livestock access and sedimentation 	

Pastureland – Conservation Effects Worksheet - 5

Name Pastureland Farmer	Address Georgia	Client ID	Field or Tract No.
Description of Treatment Option (With treatment management system) Pastureland RMS Cow-calf operation. A rotational stocking system consisting of fourteen pastures with a 2 day average grazing duration is planned. Natural springs and a small stream will be excluded from livestock use. Proper minimum grazing height is observed.			
Treatment Option No. 2		Comparison of Effects of Benchmark and Treatment Option	
Actions – Proposed Management (Kinds, amounts, and timing)	Effects (Effects of conservation treatment)	Impacts	Decisionmaker Evaluation
	<ul style="list-style-type: none"> ▪ Hybrid bermudagrass planted & fertilized at a combined cost of \$275/acre ▪ Fencing and livestock exclusion permit growth of vegetation for wildlife habitat (food and cover for turkey) ▪ Heavy use area installed at feeding and watering areas, and in livestock lanes at a cost of \$1.25 sq. ft. ▪ Nutrient expense changes as broiler litter application is decreased and commercial fertilizer is applied ▪ Nutrient management provides proper timing, amount, and kind of nutrients applied ▪ Pests are controlled with mechanical, chemical and/or biological methods ▪ Wildlife Habitat Suitability Index is 0.37 	<ul style="list-style-type: none"> ▪ Warm-season grazing on hybrid bermudagrass ▪ The potential for nutrients entering surface water and groundwater is reduced ▪ Turkey habitat is improved and sightings are increased ▪ Miring and mud hole development in and around frequently, heavily used areas has been eliminated ▪ Livestock are more docile, are more frequently evaluated, and experience fewer health problems ▪ Manure is distributed more uniformly in the pasture system ▪ Livestock are provided cool, clean drinking water ▪ Pasture health and condition is improved ▪ Operation, maintenance, management increase with rotational stocking 	

Pastureland – Conservation Effects Worksheet - 6

Name Pastureland Farmer	Address Georgia	Client ID	Field or Tract No.
Description of Treatment Option (With treatment management system) Pastureland RMS Cow-calf operation. A continuous stocking system is planned. Cattle move freely between 2 pastures using a livestock lane system. Natural springs and a small stream will be excluded from livestock use. During periods of surplus/deficit forage, temporary fencing is used to adjust grazed acreage.			
Treatment Option No. 3		Comparison of Effects of Benchmark and Treatment Option	
Actions – Proposed Management (Kinds, amounts, and timing)	Effects (Effects of conservation treatment)	Impacts	Decisionmaker Evaluation
<ul style="list-style-type: none"> ▪ 382 Fence ▪ 472 Use Exclusion ▪ 512 Pasture Planting ▪ 516 Pipeline ▪ 528A Prescribed Grazing ▪ 561 Heavy Use Area Protection ▪ 575 Animal Trails and Walkways ▪ 590 Nutrient Management ▪ 595 Pest Management ▪ 614 Watering Facility ▪ 642 Water Well ▪ 645 Upland Wildlife Habitat Management 	<ul style="list-style-type: none"> ▪ Stocking rate of 0.63 cow-calf units per acre (1 cow-calf/1.6 acres) ▪ 95% calf crop (to weaning) ▪ Pasture renovation, establishment of common bermudagrass, and sodseeding tall fescue at \$215 per acre ▪ 485 lb. average weaning weight ▪ Fencing installed at an average cost of \$0.92 linear foot to create livestock lane system, and for livestock exclusion ▪ Pipeline (\$0.85 linear foot) and 3 freeze-proof drinkers (\$500 each) installed ▪ Hay fed per cow reduced to 1.5 ton 	<ul style="list-style-type: none"> ▪ Stocking rate is unchanged ▪ Calving percentage increased by 9% ▪ Calves are born within a 90-day time period ▪ Weaning weight increased by 7% ▪ Endophyte-infected tall fescue diluted with common bermudagrass; forage quality improved ▪ Hay requirements reduced by 25% ▪ Surplus hay sold commercially ▪ Water quality of stream and natural springs protected from livestock access and sedimentation 	

Pastureland – Conservation Effects Worksheet - 7

Name Pastureland Farmer	Address Georgia	Client ID	Field or Tract No.
Description of Treatment Option (With treatment management system) Pastureland RMS Cow-calf operation. A continuous stocking system is planned. Cattle move freely between 2 pastures using a livestock lane system. Natural springs and a small stream will be excluded from livestock use. During periods of surplus/deficit forage, temporary fencing is used to adjust grazed acreage.			
Treatment Option No. 3		Comparison of Effects of Benchmark and Treatment Option	
Actions – Proposed Management (Kinds, amounts, and timing)	Effects (Effects of conservation treatment)	Impacts	Decisionmaker Evaluation
	<ul style="list-style-type: none"> ▪ Fencing and livestock exclusion permit growth of vegetation for wildlife habitat (food and cover for turkey) ▪ Heavy use area installed at feeding and watering areas, and in livestock lanes at a cost of \$1.25 sq. ft. ▪ Nutrient expense changes as broiler litter application is decreased and commercial fertilizer is applied ▪ Nutrient management provides proper timing, amount, and kind of nutrients applied ▪ Pests are controlled with mechanical, chemical and/or biological methods ▪ Wildlife Habitat Suitability Index is 0.37 	<ul style="list-style-type: none"> ▪ The potential for nutrients entering surface water and groundwater is reduced ▪ Turkey habitat is improved ▪ Miring and mud hole development in and around frequently, heavily used areas has been eliminated ▪ Livestock are provided cool, clean drinking water ▪ Pasture health and condition is improved 	