Pasture Condition Scoresheet – Cornell Small Farms Program 2016

Farm Name	Wellspring Forest Farm	**Date**	4/3/16
Paddock Description	upland, dry, hilly	**Paddock number**	5
Current Years Precipitation (check one)	Above Normal	Normal X	Below Normal

Evaluate the site and rate each indicator based upon your observations. Scores for each indicator may range from 1 to 5. Multiply the points x the weight to get weighted points. Sum the weighted points to determine overall CSP pasture condition score.

Indicator/Weight	1 Points	2 Point	3 Points	4 Point	5 Points	Points	Wt.	Wtd. Pts.
Percent Desirable Plants 10%	Desirable species <20% of stand Annual weeds and/or woody non desirable invasives are dominant.	5 Desirable species 20-40% of stand Mostly weedy annuals and/or woody invasives present and expanding. Shade is a factor.	14 Desirable species 40-60% of stand Weeds and annual non desirable weedy grasses invading. Some woody species invading	23 60-80% of plant community are desirable species. Remainder mostly intermediates and a few undesirables are present.	Desirable species exceed 80% of plant community with scattered intermediates. No undesirables present.	16/5 (3.2)	1.0	3.2
Live Plant Cover 15%	Canopy: <50% Photosynthetic area is very low. Very little plant cover to slow or stop runoff.	123 Canopy: 50-70% Photosynthetic area is low. Runoff is fast due to low plant cover.	Canopy: 70-90% Most forages are grazed close, with little leaf area to intercept sunlight. Runoff is moderate due to moderate plant 4 cover.	5 Canopy: 90-95% Spot grazed so there is some loss of photosynthetic potential. Runoff is low due to good plant cover.	Canopy: 95-100% Forages are maintained in leafy condition for best photosynthetic activity. Stands are very thick stand with slow or no runoff flows.	13/5 (2.6)	1.5	3.9
Plant diversity 10%	4 One dominant (>75% of DM wt.) forage species is present. Or, over 5 forage species are present (all < 20%) from 1 dominant functional group, not evenly grazed - poorly distributed.	13 Two to five forage species are present from 1 dominant functional group (> 75% of DM wt.). At least one avoided by livestock and mature seedstalks are displayed. Species in patches.	2 Three forage species are present (each ≥ 20% of DM wt.) from 1 functional group. None are avoided. Or, one forage species each from two functional groups, both supply 25-50% of DM wt.	5 Three to four forage species representing 2 functional groups are present are present (each ≥ 20% of DM wt.) with at least one being a legume. Well inter-mixed, compatible growth habit, and comparable palatability.	Four to five forage species representing three functional groups (each 20% of DM wt.) with at least one being a legume. Intermixed well, comparable growth habit, and comparable palatability.	11/5 (2.2)	1.0	2,2
Plant Residue (organic material covering soil) 3%	12 Ground cover: No dead leaves o stems present on soil surface. Or heavy thatch is evident (>1 inch).	34 Ground cover: 1-10% is covered with dead leaves or stems. Or, thatch is 0.5 inch to 1 inch thick.	Ground cover: 10-20% is covered with dead leaves or stems. Or, there is slight thatch buildup but 5 <0.5 inch.	Ground cover: There is 20-30% covered with dead leaves or stems but there is no thatch present.	Ground cover: 30-70% is covered with dead leaves or stems, but there is no thatch buildup.	9/5 (1.8)	0.2	.36
Plant Vigor 20%	There is no recovery after grazing. More than 80% of plants are pale yellow or brown, or permanently wilted, or lost due to insects or disease. Yields are regularly more than 30% below site potential; or there is lodged, dark green overly lush forage, often avoided by grazers.	Recovery after grazing takes 2 or more weeks longer than normal, or 50% to 80% of plants are yellowish green leaves, or there is major insect or disease yield loss, or plants are wilted most of day. Productivity is very low, 20-30% below site potential.	12 Recovery after grazing takes 1 week longer than normal, or the urine/dung patches are dark green in contrast to rest of plants, or there is minor insect or disease loss or mid-day plant wilting. Yields are regularly 10-20% below site potential.	3 Recovery after grazing takes 1 to 2 days longer than normal; 50 to 80 % of plants appear turgid and of natural green for the crop, or there is minor insect or disease damage. No plant are wilting. Yields are near site potential.	45 Rapid recovery after grazing. More than 80% of the plants appear turgid and of natural green color for the crop. There are no signs of insect or disease damage. Yields are near the potential for the species, adapted to the site's soil and climate. Desirable plants appear very competitive.	20/5 (4)	2.0	8
Percent Legume 5%	CS: legumes are < 10% by wt. Or, greater > 60%. WS , 5% legumes by wt., Or, > 60 %.	CS: 10-19% legumes. Or, losing grass, 40-60% spreading legume. WS: 5-9% legumes Or, losing grass, 40-60% spreading legume..	123 CS: 20-29% legumes. WS: 10-19% legumes.	45 CS: 30-39% legumes. WS: 20-29% legumes.	CS: 40 - 60% legumes. No grass loss; grass may be increasing. WS: 30-40% legumes. No grass loss; grass may be increasing.	17/5 (3.4)	0.5	1.7
Uniformity of Use 7%	Little-grazed patches cover over 50% of the pasture. Mosaic pattern found throughout pasture or identifiable areas of pasture avoided.	Little-grazed patches cover 30-50% of the pasture either in a mosaic pattern or obvious portion is not frequented.	Little-grazed patches cover 20-30% of the pasture either in a mosaic pattern or obvious portion is not frequented.	1234 Little-grazed patches or minor spots cover 10-20% of the pasture where isolated forage species are rejected. Urine and dung patches are avoided.	5 Rejected areas cover 10% or less of the pasture only at urine and dung patches.	21/5 (4.2)	0.7	2,14
Livestock Concentration Areas 10%	Cover >10% of the pasture; or all convey contaminated runoff directly into water channels.	Livestock conc. areas and trails cover 5-10% of pasture; most close to water channels and drain into them unbuffered.	12 Isolated livestock conc. areas and trails cover 3-5% of area; one close to water channel and drains into it unbuffered.	34 Some livestock trails and one or two smell concentration areas cover <3% of the pasture. Buffer areas are between them and water channels.	5 No presence of livestock concentration areas. Areas are well sited, or treated to minimize contaminated runoff.	19/5 (3.8)	1.0	3.8
Soil Compaction (Probe moist soil) 5%	Very hard to push probe into soil without damaging the probe. Infiltration capacity and surface runoff severely effected by heavy compaction. Excessive livestock traffic killing plants over wide areas.	Hard to push probe past compacted layers. Livestock trails common throughout the pasture. Off-trail hoof prints common. Infiltration capacity is lowered and surface runoff increased due to large areas of bare ground and dense compaction layer at surface.	5 1 Soil resistant to soil probe entry at one or more depths within plow depth. Infiltration capacity lowered and surface runoff increased due to plant cover loss and soil compaction by livestock hooves.	234 Probe enters soil easily except at rocks. There are scattered signs of livestock trails and hoof prints, confined to lanes or small, wet areas. Infiltration capacity is lowered and surface runoff is increased due to reduced vegetal cover/retardance.	Probe enters soil easily. Soil is friable and biological activity is evident, especially around manure piles. Infiltration capacity and surface runoff are equal to that expected for an ungrazed meadow, not affected by livestock traffic.	18/5 (3.6)	0.5	1.8
Erosion 15%	Sheet and rill erosion is active throughout pasture; rills are 3-8 inches deep at close intervals and/or grazing terracettes are close-spaced with some slope slippage.	Most sheet and rill erosion is confined to steepest terrain of unit; well defined rills are 0.5-3 inches deep at close intervals and/or grazing terracettes are present.	Most sheet and rill erosion is confined to heavy use areas, especially in loafing areas and water sites; rills are 0.5-3 inches deep. Debris fans are found at down slope edge.	5 No current formation of rills. There is some evidence of past rill formation, but they are grassed. Scattered debris dams of litter are occasionally present.	1234 No evidence of current formation of sheet flow or rills.	24/5	1.5	4,8

Overall Pasture Condition Score	Individual Indicator Score	Management Change Suggested
45 to 50	5	No changes in management needed at this time.
35 to 45	4	Minor changes would enhance, do most beneficial first.
25 to 35	3	Improvements would benefit productivity and/or environment.
15 to 25	2	Needs immediate management changes, high return likely.
10 to 15	1	Major effort required in time, management and expense.

Overall Pasture Condition Score = ~~32.0~~ 32.7

Comments/Notes

Increase legumes

Biological Monitoring Data - Basic
(Five needed per transect)

Property Wellspring Forest Farm Transect/Plot Number 5 Photo No's _____

Date 4/3/16 Examiner(s) S Gabriel

1. Soil Surface. Describe the nature nature of the bulk of the soil surface between plants. (Is it bare,capped, broken, covered with litter, covered with algae and lichen, hard, soft, porous, etc.? Are their signs of soil movement/erosion, such as pedestaling, siltation in low points, etc?)

Soil surface in 2, 3, 4 was covered with litter + soft, loose 5 were more bare and hard. Minimal signs of erosion

2. Animal Sign. What signs of animal life are present (small or large animals, birds, insects, reptiles)?

some bird poo in 3+4 evidence of worms in 1+5 deer poop near 4

3. Litter. If there is litter present, describe its quality/ condition (fresh, old, or breaking down so it is hard to distinguish where litter ends and soil begins).

brown but not too old in all plots

4. Perennial Grass Condition. If perennial grasses present, describe their condition. (Are they healthy, mature, young, seedlings, dead/dying, overrested, overgrazed?)

healthy clumps of timothy + rye grass with decent clover coverage

5. Grass Species. List grass species in the plot if you know their names.

timothy
ryegrass

6. Other Plants. List or comment on other non-grass plant species present (legumes, forbs, etc.).

clover - red

7. Points of Interest. Note any other points of interest, including things that might not show well in the photo.

one of the sheeps favorite pastures, regrows pretty fast