

Pasture Productivity Pail



Pasture Productivity Pail contains –

1. Pasture Productivity Booklet
2. Soil Conductivity & Temperature Tester
3. Grazing Stick, Grassworks
4. Refractometer Optical (Optional)
5. Vice Grip (Optional)
6. Soil Moisture Monitor
7. Toxic Plants in Midwest Pastures and Forages, UWEX
8. Identifying Pasture Legumes, UWEX
9. Identifying Pasture Grasses, UWEX
10. Reference Guide for Estimating Legume/Grass Content
11. Indicator Plants that Reflect Soil or Grazing Problems
12. Pasture Condition Scoring Guide
13. Common Pasture Weeds and Grasses Guide
14. Clipboard, Notebook and Pen
15. Images of Ground Cover
16. Soil Probe
17. Soil Sample Bags & Instructions
18. Soil Compaction Meter (Optional) or Marking Flags
19. NRCS Grazing Record-Keeping Chart
20. Vegetation Sampling Hoop
21. Infiltrator (Optional)
22. Grass Shears & Paper Sample Bags
23. Scale





Photo	Item	Quantity	Specifications	Use	Approximate cost, Provider Information, and notes
0 	Pasture Productivity Pail	1	6 Gallon Bucket with padded lid	To carry the tools and materials to the pasture	\$17.59 https://z.umn.edu/Bucket
1 	Pasture Productivity Booklet	1 per pail	Binder with marked sections matching tools	Contains instructions for use of tools	\$20 https://z.umn.edu/PineCountyExtensionOffice
2 	Soil Conductivity & Temperature Tester	1 per pail	Hanna Instruments #HI98331	Measure soil conductivity and air and soil temperature.	\$119.00 https://z.umn.edu/ConductivityTester
3 	Grazing Stick, Grassworks	1 per pail	35" long, Grassworks	Take pasture height and measurements for forage density to estimate forage mass	\$20.00 https://z.umn.edu/GrazingStick





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4 	Refractometer Optical (Optional)	1 per pail	Vee Gee Mfr. Model #43015	Indirect measure of forage quality, can be highly variable https://z.umn.edu/BrixLevels	\$112.00 https://z.umn.edu/Refractometer https://z.umn.edu/MonitoringPastureQuality
5 	Vice Grip (Optional)	1 per pail	7" Modified Vise Grips	Squeeze out plant juices for refractometer	\$60 https://z.umn.edu/BrixGrips
6 	Soil Moisture Monitor	1 per pail	General Moisture Meter - Mfr Model #DSMM600	Measure moisture of soil	\$53.00 https://z.umn.edu/SoilMoistureMeter
7 	Toxic Plants in Midwest Pastures and Forages, UWEX	1 per pail	Publication from University of WI	Identify noxious and toxic weeds	\$3.75 https://z.umn.edu/ToxicPlants

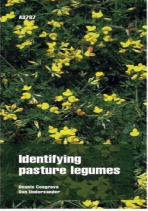
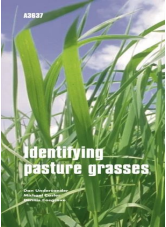


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8 	Identifying Pasture Legumes, UWEX	1 per pail	Publication from University of WI	Help identify legume species	\$8.95 https://z.umn.edu/IdentifyingPastureLegumes
9 	Identifying Pasture Grasses, UWEX	1 per pail	Publication from University of WI	Help identify grass species	\$8.95 https://z.umn.edu/IdentifyingPastureGrasses
10  <small>Figure 7. Sward containing 55% legume, 25% grass, 22% weeds, 7.0-inch canopy height, and 1677 lbs dry matter acre⁻¹ forage mass.</small>	Reference Guide for Estimating Legume/Grass Content	1 per pail	Publication from Forage and Grazing Lands- originally WVU	Images to determine mix of grass and legume	FREE https://z.umn.edu/VisualReferenceGuide
11 	Indicator Plants that Reflect Soil or Grazing Problems	1 per pail	Publication from University of Vermont	Determine soil problems by identifying plant reactions	FREE https://z.umn.edu/IndicatorPlants

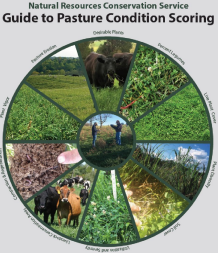

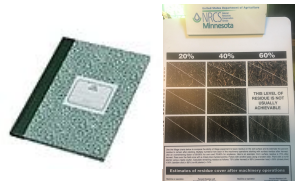
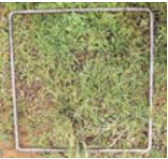
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12 	Pasture Condition Scoring Guide	1 Guide, 1 score sheet per pasture area	Available from NRCS	Get an overall score for pasture condition – accounting for many variables	FREE https://z.umn.edu/PastureConditionScoring
13 	Common Pasture Weeds and Grasses Guide	1 Guide per pail	Available from University of Vermont, Apps available in smartphone App stores	Identify weeds that affect forage quantity and quality Identify & map plants with phone camera for future reference	FREE https://z.umn.edu/CommonPasture https://z.umn.edu/IdentifyingandControlling https://z.umn.edu/IDWeedsApp FREE w/ ads or \$19.99/yr https://z.umn.edu/PlantSnapApp
14 	Clipboard, Notebook and Pen	1 set per pail		Record observations for future evaluation	\$15-20 Many sources
15 	Images of Ground Cover	1 copy per pail	Available from Australia Wool LTD	Images to estimate ground cover percentages	https://z.umn.edu/GroundCover



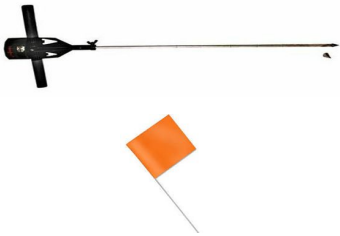
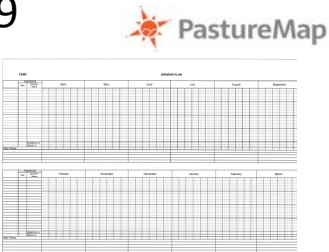



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16 	Soil Probe	1 per pail	AMS Soil Recovery Probe MFR Model 401.42	Take soil sample for soil test analysis https://z.umn.edu/HowtoSample	\$98.00 https://z.umn.edu/SoilRecoveryProbe
17 	Soil Sample Bags & Instructions	5-6 per pail	pH, OM, P, K and soil texture (separate nitrate test available)	Determine soil fertility that impacts plant growth	\$17.00 basic test https://z.umn.edu/SoilTestSample
18 	Soil Compaction Meter (Optional) or Marking Flags	1 per pail or bundle of 10 marking flags	Agratronix penetrometer https://z.umn.edu/AgratronixSoilCompactionTester	Measure soil compaction up to 24" with penetrometer or push in flags	\$169 https://z.umn.edu/DiagnosingSoilCompaction \$8/100 https://z.umn.edu/StakeFlags
19 	NRCS Grazing Record-Keeping Chart	1 copy per pail, App available in smartphone app stores	11x17 sheet for recording grazing plan and usage	Keep track of rest periods and estimate available forage throughout the season	https://z.umn.edu/PastureMap https://z.umn.edu/PineCountyExtensionOffice

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20 	Vegetation Sampling Hoop	1 per pail	Make your own with #9 or similar gauge wire, 59" equal 1.92 sq ft	Weigh sample in grams (-bag weight) x 50 = #/Acre Green Weight. Air Dry and repeat for DM	\$22 https://z.umn.edu/SamplingHoop
21 	Infiltrometer (Optional)	1 per pail	6" diameter section of 12 gauge steel tubing with one end beveled.	Use to estimate infiltration patterns for soil types and conditions https://z.umn.edu/InfiltrationTest	\$176 https://z.umn.edu/InfiltrationRings
22 	Grass Shears & Paper Sample Bags	1 shears, 30 bags	Corona classic cut 4-½" grass shears	Cut sample grass from area within hoop. Dry in bag. https://z.umn.edu/HardwareBags	\$25.25 https://z.umn.edu/GrassShear \$11/250 bags
23 	Scale	1 per pail	Pesola 600g x 500g Medio-Line Spring Scale	Weighing forage cuttings to calibrate measurements	\$58.95 https://z.umn.edu/SpringScale