Glossary of Terms

adaptation: the process or end state of plant-environment interactions that result in favorable performance within a particular environment.

alkaloid: one of a class of basic organic compounds with nitrogen in their structure. In forages, often associated with tall fescue, perennial rye, reed canarygrass among others.

aggressive species: A species that spreads into other areas to become a dominant plant.

alien species: Introduced species that are non-native to a region. Alien species may or may not be invasive. It is estimated that at least 25% of flowering plants in North America are alien species, most of European origin.

allelopathic: A harmful effect of one plant species on itself or another species through release of a chemical compound.

bolting: initiation of reproductive growth in plants by the formation of an elongated stem or seed stalk; generally associated with biennial plants.

boot stage: Growth stage when a grass inflorescence is enclosed by the sheath of the uppermost leaf. This is just before seed head emergence from the stem. This stage is often recommended for hay harvesting as it represents a compromise between quality and yield.

broadcast seeding: Scattering seed on the surface of the soil, in contrast to drill seeding, in which seeds are placed in rows in the soil.

bulk seed: seed sold in weight that includes non-viable seed, leaves and stems (typically lower price/pound)

C_3: Refers to number of carbons used in photosynthesis (cool-season plants.)

C_4: Refers to number of carbons used in photosynthesis (warm-season plants.)

bunch-type Growth Habit: plant development at or near the soil surface without production of rhizomes or stolons.

canopy: the vertical projection downward of the aerial portion of plants, usually expressed as percent of ground cover.

center of origin: the geographic region in which a taxon (species, genus, family, etc.) or a crop originates.

certified seed: certified seed is the progeny of breeder, select, foundation, or registered seed so handled to maintain satisfactory genetic purity and identity, and which has been acceptable to the certifying agency.

coated seed: seed for planting purpose to which is individually added a substantial amount of foreign material designed to make the seed uniform in size and shape and free flowing, or to serve as a carrier of fertilizer, pesticides, nitrogen fixing micro-organisms, coloring or other additives.

common seed: a term applied to seed that cannot be identified as to variety; sometimes used to denote local strains resulting from natural selection.

companion crop: one crop grown with another, used particularly of the small grains with which forage crops are sown. Synonym: nurse crop.

conventional tillage: The combination of primary and secondary tillage operations normally performed in preparing a seedbed for a given crop grown in a given geographical area. The amount of crop residue on the surface, immediately after

planting, is less than 30 percent.

cool-season plant: A plant that makes its major growth during the cool portion of the year, primarily in the spring but in some localities in the fall. Examples are small grains, fescue, orchardgrass, bluegrass, timothy and alfalfa.

correction strip: An irregular width strip of permanent vegetative cover (usually herbaceous) established across a field slope for the purpose of adjusting> and maintaining contour lines of adjacent cropped strips.

cover crop: A close-growing crop grown primarily for the purposes of protecting and improving soil between periods of regular crop production or between trees and vines in orchards and vineyards. Also for nutrient management (nitrogen uptake to reduce leaching over winter).

critical area planting: A conservation practice designed to stabilize a site with excess active erosion. In most cases, the erosion is so severe that heavy construction equipment rather than agricultural equipment is needed to prepare the site. Other structural practices may be necessary in conjunction with this practice as well as a permanent land use change (i.e., trees or shrubs) may be advised.

cultipacker seeder: a mechanical seeder designed to place turf grass seeds in a prepared seed bed at a shallow soil depth, followed by firming of the soil around the seed; usually consists of a pull type or tractor rear mounted unit having a seed box positioned between the larger, ridged front roller and an offset, smaller rear roller.

determinate: characterizing the termination of vegetative growth by morphological or physiological causes. For example, apical flowering. Competitive sink demands.

developmental stage: discrete portion of the life cycle of a plant, such as vegetative growth, reproduction, or senescence.

dormancy: a physical or physiological condition of a viable seed that prevents germination even in the presence of otherwise favorable germination conditions. Synonym: seed dormancy.

drill seeding: Planting seed with a drill in relatively narrow rows, generally less than a foot apart.

early Successional: Usually includes shorter lived sun-loving plants such as grass, forbs, shrubs, or young trees that appear after soil disturbance. Normally considered to occur from year 0 to year 10-15.

ecological system: energy driven complex of one or more organisms and their environment. Synonym: Ecosystem.

ecology: the study of communities of living things and the relationships between organisms and their environment.

endemic: indigenous or native to a restricted locality.

endophyte: an organism that lives at least part of its life cycle within a host plant. Often mentioned in relation to endophyte infected tall fescue.

endophytic fungus: a fungal organisms whose life cycle includes inhabiting another plant. Most often referred to with tall fescue.

epigeal germination: a type of germination in which the cotyledons are raised above the ground by elongation of the hypocotyls.

established: Vegetation is considered established when the seed has germinated and grown to the point at which it will serve its intended purpose. An example is the grass in a grassed waterway. The grass is considered established when it has

reached the height and density to provide the designed retardance.

exotic plant: an introduced plant that is not fully naturalized or acclimated.

fertilizer: Any organic or inorganic material of natural or synthetic origin that is added to a soil to supply elements essential to plant growth.

fescue toxicosis: the collective animal syndromes associated with exposure to endophyte infected tall fescue; these include fescue foot, fat necrosis, "summer syndrome".

filter strip: Strip of permanent vegetation above farm ponds, streams, diversions, terraces, and other structures to retard flow of runoff water, causing deposition of transported material.

flowering stage: the physiological stage of a grass plant in which blooming (anthesis) occurs or flowers are visible in nongrass plants.

forage crop: a crop of cultivated plants or plant parts, other than separated grain, produced to be grazed or harvested as feed for animals.

forb: A broad-leafed, herbaceous plant that is not a grass, sedge, or rush.

fruiting period: the period during which heading, pollination, and seed maturation occur.

dermination: resumption of active growth by the seed embryo, culminating in the development of a young plant.

grasslike plants: vegetation that is similar to grass in appearance and is usually a member of the plant family sedges or rushes.

hardiness: capability of an organism to withstand environmental stress. Synonym: stress tolerance.

herbaceous: These are flowering plants whose stems live only one season. They do not usually form woody tissue as shrubs and trees do, though their roots may live many years. They can be annuals, but most are perennials.

hulled seed: Any seed normally covered by a hull or other coating, from which the hull has been removed.

hybrid: first generation progeny resulting from the cross fertilization between individuals that differ in one or more genes.

hydroplanting: planting vegetative propagules (e.g., stolons) in a water mixture by pumping through a nozzle that sprays the mixture onto a plant bed. The mixture may also contain other materials such as fertilizer and mulches.

hydroseeding: planting seed in a water mixture by pumping through a nozzle that sprays the mixture onto a seedbed. The water may also contain other materials such as fertilizer and mulches.

hypogeal germination: a type of germination in which the cotyledons remain below ground while the epicotyl grows and emerges above the ground. Grasses.

imbibition: the uptake of moisture by absorption.

inoculant: a seed or soil additive, especially for legume seed, composed of specific nitrogen fixing bacteria that facilitate nitrogen fixing in the subsequent crop.

inoculation: The process of adding inoculant to seed; used frequently to designate the treatment of legume seeds with microbes that allow nitrogen to be fixed from air ..

introduced species: a species not part of the original fauna or flora of the area in question; i.e., brought by human activity from another geographical region.

invasive species: Typically exhibit the following characteristics--highly successful

seed dispersal, germination, and colonization; rampant spread; ability to out-compete other species.

lignification: the thickening, hardening, and strengthening of plant cells by the disposition of lignin on and in the walls of plant cells.

lime: The term is commonly used in agriculture to include a great variety of materials that contain calcium. The more commonly used forms of agricultural lime are ground limestone (carbonates), hydrated lime (hydroxides), burnt lime (oxides), marl, and oyster shells. Lime is used to furnish calcium and magnesium as essential elements for the growth of plants and to neutralize soil acidity.

limiting factor: an environmental variable found at a level that restricts the performance of the organism.

mast: fruits and seed of shrubs, woody vines, trees, and other non-herbaceous vegetation available for animal consumption.

monoculture: the use of one crop or family of crops either continuously, year after year, or alternated with fallow.

mulch blower: a machine using forced air to distribute particles of mulch over newly seeded grass seeded areas.

mulch till: Soil tillage that employs plant residues or other materials to cover the ground surface. Immediately after planting, there will be a minimum of 30 percent ground cover to a maximum of < 60 percent.

native species: a species indigenous to an area; i.e., not introduced from another environmental area.

naturalized plants: introduced species that have become established in a region. Compare native or indigenous.

no-till: A method of planting crops that involves no seedbed preparation other than opening the soil for the purpose of placing the seed at the intended depth. This usually involves opening a small slit or punching a hole in the soil. There is no cultivation during crop production. Immediately after planting, there will be at least 60 percent ground cover.

nurse crop (companion crop): An annual crop which may be seeded with permanent species of grasses and/or legumes at establishment to provide quicker cover and soil protection. They are most beneficial when seeding conditions--either time of seeding, soil conditions, or both--are less than ideal.

open pollination: natural, as opposed to controlled, pollination. Contrast with hybrid seed.

pre-germinated seed: partial germination of seed, prior to planting.

protein, crude: an estimate of protein content based on a determination of total nitrogen content times a constant, i.e., N x 6.25 .

prussic acid: also known as hydrocyanic acid (HCN) a poison produced as a glucoside by several plant species, especially sorghums, wild cherry tree leaves.

pure live seed (PLS): the amount of live seed in a lot of bulk seed.

scarification: the process of altering a seed coat to make it more permeable. This may be accomplished by mechanical abrasion, or treatment with acid, hot water, or other methods**.**

seed purity: The percentage of the desired species in relation to the total quantity of materials including other species, weed seed, and foreign matter.

source-sink: a relationship between two parts of a system (two plant organs) in

which one organ serves as the producer or source of a material that is translocated to the second part, the sink, where the material accumulates or is consumed.

stratification: Certain seed types (usually seeds having a hard seed coat) require a moist-chilling process before they begin to germinate. The process allows the seed coat to soften and absorb moisture. These seeds are normally placed between layers of moist soil, peat or vermiculite (thus the name stratified) and refrigerated for several months before planting. Some plant species require warm-moist process also.

temporary cover: Seeded outside of optimum periods for a permanent cover species. It provides protection until the permanent species can be established.

thatch: an intermingled layer of dead and living shoots, stems, and roots that develops between the zone of green vegetation and the soil surface.

transitional climatic zone: the suboptimal zone between the cool and warm climates where both warm and cool season grasses can be grown, i.e., Southern Piedmont and Coastal Plain regions of VA.

unhulled seed: Any seed normally covered by a hull or other coating and from which the hull has not been removed.

unscarify: No process is implemented that will abrade, scratch, or modify the surface of the impervious seed coat of hard seed. Unscarified seed is used to lengthen the germination period.

vegetative propagation: asexual propagation using pieces of vegetation (e.g., sprigs for bermudagrass, sod pieces).

vernalization: floral (flower) induction by low temperatures. Examples, tall fescue, orchardgrass, bluegrass.

volunteer plants: plants that occur not as a result of current seeding of the crop under consideration but resulting from seeds or propagative vegetative parts growing uncontrolled from previous seeding or escaped plant parts that have been scattered by natural means.

warm-season plant: A plant that completes most of its growth during the warm portion of the year, generally late spring and summer. Examples are corn, millets, sorghum-sudan, the bluestems, switchgrass, bermudagrass, and eastern gamagrass.