

Wildlife and Biomass Feedstocks From Perennial Landscapes

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Wildlife Habitat Needs

Deer

Home Range 300-400 Acres on Good Habitat (Usually No greater than 640 Acres)

Ideally Hardwood Forest with 1/3 Saplings, 1/3 Pole-sized Timber, and 1/3 Mature Timber

Wildlife Habitat Needs

Turkey

Home Range 2-4 acres

Mature Hardwoods with 5-10%
Herbaceous (Grass and Wildflower)
Openings in Small Blocks. Turkeys will
Not Wander more than 150 Feet from a
Mature Hardwood Forest

Wildlife Habitat Needs

Quail

15 – 75 Acres per 15-Bird Covey

All Habitat Elements within 150 feet

50 – 80% Native Grasses and Wildflowers
with no More than a 75% Stand

10 - 25% Annual Forbs (Weeds, Crops)

10 – 25% Low Woody Cover (Shrubs)

Wildlife Habitat Needs

Neotropical Migratory Songbirds

The Most Restrictive Species Require
Unfragmented Bottomland Hardwood
Forests of from 10 – 10,000 Acres

Fragmentation Allows Nest Predators to
Prevent successful Nesting

Perennial Landscapes

Native Warm Season Grasses

Non-Native Warm Season Grasses

Pine Plantations

Fast-Growing Hardwood Plantations

(Willow, Poplar)

Native Warm Season Grasses



Native Warm Season Grasses

Species such as Switchgrass,
Big Bluestem, Indiangrass and
Eastern Gamagrass

Have a History of Forage Production

Switchgrass is the Easiest to Establish and
Biomass Cultivars Have Been Developed

Native Warm Season Grasses

Wildlife Impacts

Superior to Non-Native Warm or
Cool Season Grasses and Crops
for Wildlife Cover

Extensive Areas of Dense Monocultures Not Optimal
Habitat for Grassland Wildlife Species Such as Quail,
Rabbits, and Grassland Songbirds that Require
Sparse Stands of Grass and Wildflowers with
Hedgerows and Annual Weeds in Close Proximity to
Grass Cover

Native Warm Season Grasses

Wildlife Impacts

Extensive Areas of Herbaceous Cover Not Optimal Habitat for Deer or Turkey that Require Forests with Little Herbaceous Vegetation

Extensive Areas of Herbaceous Cover Not Suitable Habitat for Forest Interior Breeding Birds that Cannot Tolerate any Herbaceous Vegetation

Native Warm Season Grasses

Wildlife Impact Mitigation

Impacts can be Lessened by Staggering Harvest Time of Grass and Diversifying the Stand Composition, Especially with Legumes and Wildflowers

Impacts can be Lessened by Managing Less Extensive Areas and Providing Other Types of Habitat

Non-Native Warm Season Grasses



Non-Native Warm Season Grasses

Species such as Miscanthus, Vetiver,
Elephantgrass, and Giant Reed

Grasses with Higher Production Potential
Than Native Grasses

Known for Being Invasive and Monoculture-
Forming by Their Seed Production and
Dissemination and Vegetative Spread

Non-Native Warm Season Grasses

Wildlife Impacts

Inferior to Native Warm Season Grasses
for Wildlife Cover and Have the Potential to
Spread and Destroy Adjacent Habitat

Extensive Areas of Dense Monocultures Not
Optimal Habitat for Grassland Wildlife Species
Such as Quail, Rabbits, and Grassland
Songbirds that Require Sparse Stands of Grass
and Wildflowers with Hedgerows and Annual
Weeds in Close Proximity to Grass Cover

Non-Native Warm Season Grasses

Wildlife Impacts

Extensive Areas of Herbaceous Cover Not Optimal Habitat for Deer or Turkey that Require Forests with Little Herbaceous Vegetation

Extensive Areas of Herbaceous Cover Not Suitable Habitat for Forest Interior Breeding Birds that Cannot Tolerate any Herbaceous Vegetation

Non-Native Warm Season Grasses

Wildlife Impact Mitigation

Impacts can be Lessened by Using the Sterile Cultivar 'Freedom' of Miscanthus to Minimize the Potential for Invasiveness

Impacts can be Lessened by Managing Less Extensive Areas and Providing Other Types of Habitat

Pine Plantations



Pine Plantations

Usually Loblolly Pine

Have a History of High Production for
Short Rotation Pulpwood Production

Cultural Practices (Mechanical Site
Preparation, Herbicide Application,
Burning)are Well Known

Pine Plantations

Wildlife Impacts

Clearcuts Provide Ideal Grass and Wildflower Quail Cover for a Few Years after Harvest until the Canopy Closes

Extensive Areas of Dense Monocultures Not Optimal Habitat for Grassland Wildlife Species Such as Quail, Rabbits, and Grassland Songbirds that Require Sparse Stands of Grass and Wildflowers with Hedgerows and Annual Weeds in Close Proximity to Grass Cover

Pine Plantations

Wildlife Impacts

Extensive Areas of Herbaceous Cover after Harvest are Not Optimal Habitat for Deer or Turkey that Require Hardwood Forests with Little Herbaceous Vegetation

Extensive Areas of Pine Forest Not Suitable Habitat for Forest Interior Breeding Birds that Require Hardwood Forest

Pine Plantations

Wildlife Impact Mitigation

Impacts can be Lessened by Using Fewer
Site Preparation Herbicides that Kill and
Suppress Native Grasses and Wildflowers

Impacts can be Lessened by Managing
Less Extensive Areas and Providing Other
Types of Habitat

Pine Plantations

Wildlife Impact Mitigation

Impacts can be Lessened by Leaving
Fine Woody Material on the Site for
Invertebrates (Insects) to Use for
Food and Cover

Fast-Growing Hardwood Plantations



Fast-Growing Hardwood Plantations

Usually Willow or Poplar (Cottonwood)

Have Had Some History of Production for
Short Rotation Pulpwood Production

Cultural Practices are Established

Fast-Growing Hardwood Plantations

Wildlife Impacts

Clearcuts Provide Ideal Grass and Wildflower
Quail Cover for a Few Years after Harvest until
the Canopy Closes

Extensive Areas of Dense Monocultures Not
Optimal Habitat for Grassland Wildlife Species
Such as Quail, Rabbits, and Grassland
Songbirds that Require Sparse Stands of Grass
and Wildflowers with Hedgerows and Annual
Weeds in Close Proximity to Grass Cover

Fast-Growing Hardwood Plantations

Wildlife Impacts

Extensive Areas of Herbaceous Cover after Harvest are Not Optimal Habitat for Deer or Turkey that Require Hardwood Forests with Little Herbaceous Vegetation

Extensive Areas of Young Hardwood Forest Not Suitable Habitat for Forest Interior Breeding Birds that Require Mature Hardwood Forest

Fast-Growing Hardwood Plantations

Wildlife Impact Mitigation

Impacts can be Lessened by Using Fewer
Site Preparation Herbicides that Kill and
Suppress Native Grasses and Wildflowers

Impacts can be Lessened by Managing
Less Extensive Areas and Providing Other
Types of Habitat

Fast-Growing Hardwood Plantations

Wildlife Impact Mitigation

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