

***Microstegium vimineum***  
**Spread Rate in Relation to**  
**Two Different Leaf Litter**  
**Disturbances**

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Photo by: Fairmount Park Commission

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***Microstegium vimineum***

What is it?  
AKA – Japanese stilt grass,  
Napolese browntop

Native to most of Asia

~1918 – documented in TN



Chanki Bangera, University of Georgia

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**Range in the USA**



PLANTS Database

HVI

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### *Microstegium vimineum*

Annual,  
sprawling grass

Can exceed 3ft  
in height

C4 shade  
tolerant



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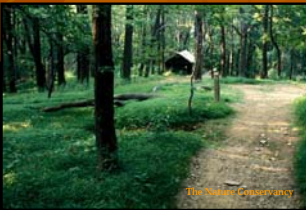
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### *Microstegium vimineum*

GENERALIST



- GROWS IN A VARIETY OF LIGHT, MOISTURE, AND NUTRIENT CONDITIONS

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### Seeds and Dispersal

Cross and self fertilizes

Hundreds of seeds per plant

Excessive runoff

Animals

Contaminated material (i.e. hay)

Vehicles/equipment

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## Spread Rate

Affect of leaf litter disturbance?



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## Objective

To determine what affect leaf litter disturbance has on the spread rate of *Microstegium vimineum*.



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## Methods Site Selection

3 Sites  
Definitive patch/infestation  
Cumberland Forest and Oak Ridge  
Arboretum

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### Treatments

1. No Disturbance (control)
2. Stir/Mix leaf litter
3. Remove leaf litter

Three of each treatment per site

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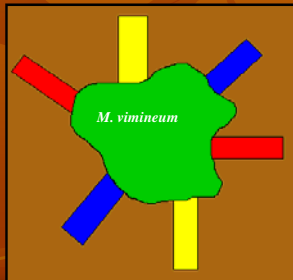
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### Example Patch

Treatment dimensions  
= 1/2 x 2 meters

1/2 meter subplots  
within each treatment



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### Implementation

Stirring and removal of litter

Mid March



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**Measurements**

**Taken on monthly basis**

1. Spread Rate
2. Percent Cover estimation for ½ meter subplots
3. Light and Moisture measurements

**Stem count at end of study**

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**Statistics**

**One way ANOVA – block design**

1. Control vs. stirred litter
2. Control vs. removed litter
3. Stirred litter vs. removed litter

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