

# 2007 IPM Legume PIPE – Field Sampling Protocols

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# Legume Pests - Sampling Groups

{Soybean, Common Bean, Pea, Chickpea, etc.}

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**Group 1** – Small lesions or spots (pustules); e.g., Soybean Rust or Common Rust

**Group 2** – Small to large foliar and/or pod lesions or spots; e.g., Septoria Leaf Spot or Common Bacterial Blight

**Group 3** – Legume Viruses; e.g., *Soybean mosaic & Bean pod mottle* or *Bean common mosaic & Beet curly top virus*

**Group 4** – Insect Pests; e.g., Soybean Aphid or Bean/Pea Aphid

# Legume Pests – No. of Samples:

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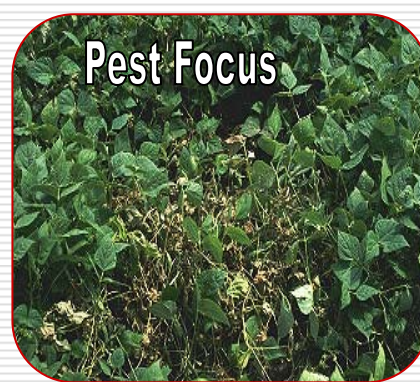
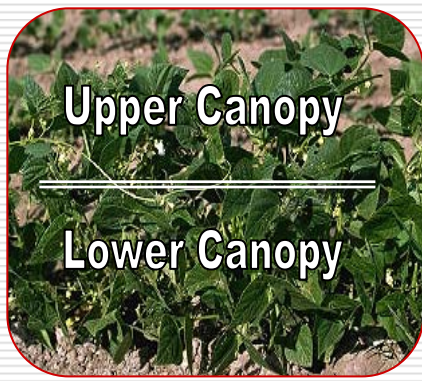
**Group 1** – Small lesions or spots; biweekly (4 – 6)

**Group 2** – Small to large lesions or spots; monthly (3 – 4)

**Group 3** – Legume Viruses; seasonal (2)

**Group 4** – Insect Pests; seasonal (2)





## Legume Pests – Field Observations:

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- ❑ Look for obvious foci of plants exhibiting stress or symptoms:
  - plant stunting, chlorosis, necrosis, deformation, defoliation
- ❑ Examine the lower and upper surface of leaves or stems:
  - lower to middle canopy for SBR, White Mold
  - middle to upper canopy for bacteria, viruses
- ❑ If no foci present, walk a transect on a diagonal or zig-sag pattern throughout the Sentinel Plot or commercial field
  - Stop every 5 – 10 paces, examine or sample 5 plants for transport to NPDPN lab for diagnostic protocol



**ipmpipe**  
PEST INFORMATION PLATFORM  
FOR EXTENSION & EDUCATION

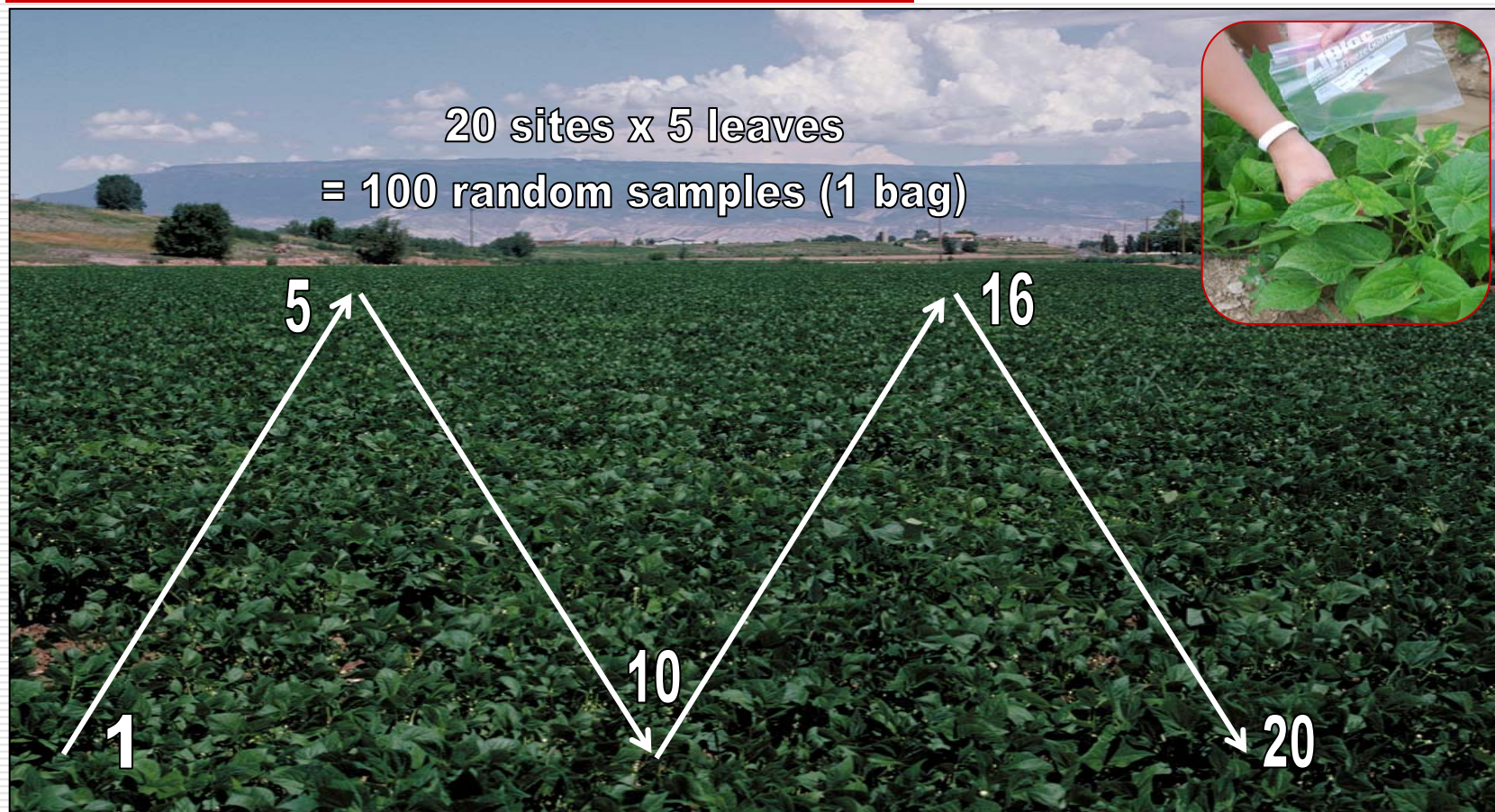


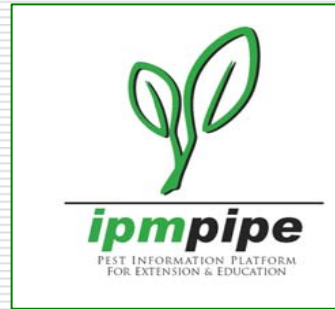
Group 1



Group 2

## Legume Pests –Groups 1 and 2:

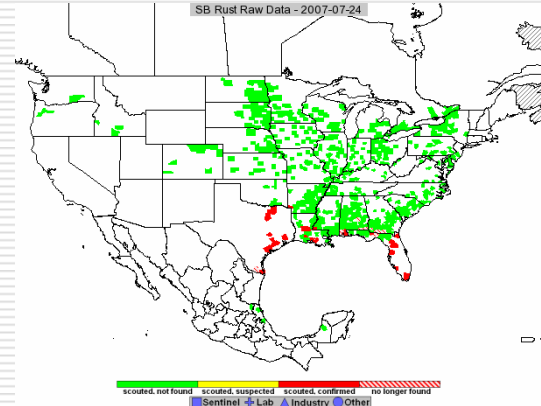




# Legume Pests –Groups 3 and 4:

9 sites x 5 leaves  
= 45 random samples (9 bags)

10  
5 leaves  
*"Suspect Virus"*



# Field Notes & Laboratory Diagnostics:

- Note crop growth stage and incidence/severity of other priority pests of each legume species
- Label and transport all samples to nearest diagnostic lab
- Provide timely updates to the web site for Sentinel Plot and Commercial Legume Crop observations, reports and recommendations
- Q U E S T I O N S ??

