# Bushkiller (*Cayratia japonica)* A New Noxious Weed in NC

Rick Iverson Weed Specialist Plant Industry Division



NORTH CAROLINA DEPARTMENT OF AGRICULTURE & CONSUMER SERVICES

### **Bushkiller Distribution**

 Currently found on 7 sites in NC: 1 private residence in Winston/Salem; 3 private residences in Lexington; 1 private residence in Midway; Along Douglas Branch creek Charlotte (2 acres); Reynolda Gardens Winston/Salem (several acres)



Based on CLIMEX simulation model it could potentially survive in most of the United States. May Have Economic and Environmental Concerns Similar to Kudzu (West, 2008 Bushkiller RA)

- Displacement of native vegetation and wildlife
- Increased control costs in Right-of-ways and natural areas
- Diminished aesthetic value of land

## **Identification Characteristics**



Perennial herbaceous vine

Don't confuse w/ VA creeper

- 5 leaves laterals are bifurcated (forked)
- Tendrils bifurcated



 Extensive roots/rhizomes that readily sucker

### **Reproductive Characteristics**

- Appears to be sterile. No viable seed witnessed in U.S.
- Asexual reproduction only. Produces new shoots from root suckers.
- New shoots will develop from root fragments as small as 1 cm in length buried to a depth of 20 cm or 5 cm in length buried to a depth of 40 cm. (West- unpublished data)





### **Control Considerations**

- Must be careful with soil active herbicides to avoid damaging trees
- Injection or cut surface applications will work but are impractical for large infestations
- Hand pulling may work, but the entire root system must be extracted – very difficult
- Systemic herbicides provide the best alternative

#### Imazapyr Application – Lexington, NC

# Dead tree from application of imazapyr in early summer 2008.



#### Application: 8/6/09 Arsenal®

52 fl. oz/acre (1.62 qt/a) estimated actual applied with handgun at 135 Gal/acre total volume.

11.5 weeks after treatment. Picture taken 10/30/09.

### Herbicide Treatment Evaluations (West, MS Thesis, NCSU Nov., 2008)

Herbicide	Rate	% Control - 10 Months After Treatment
Imazapyr	1.5 lb/acre	93%
Sulfometuron	6 ounces/acre	88%
DPX KJM44	19.2 fl.oz./acre	99%

### **Bushkiller Summary**

- Potential to survive in most of U.S.
- Medium risk of spread only via root suckers.
- Medium economic impact
- High environmental impact
- Medium risk of introduction (likely through contamination of nursery stock)
- It is listed as a NC Class B noxious weed. Quarantined to 4 NC counties.
- More research needed to find suitable treatments that are safe around desirable trees