Implementation of Mobile Technologies for Agricultural Surveys

North Carolina Department of Agriculture and Consumer Services
Plant Industry Division
### Messaging & Social App Use Triples in 2013

Year-over-year growth of app usage, by category:

<table>
<thead>
<tr>
<th>Category</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Messaging and Social</td>
<td>203%</td>
</tr>
<tr>
<td>Utilities and Productivity</td>
<td>149%</td>
</tr>
<tr>
<td>Overall App Usage</td>
<td>115%</td>
</tr>
<tr>
<td>Music, Media &amp; Entertainment</td>
<td>78%</td>
</tr>
<tr>
<td>Lifestyle &amp; Shopping</td>
<td>77%</td>
</tr>
<tr>
<td>Games</td>
<td>66%</td>
</tr>
<tr>
<td>Sports, Health &amp; Fitness</td>
<td>49%</td>
</tr>
<tr>
<td>News &amp; Magazines</td>
<td>31%</td>
</tr>
</tbody>
</table>

* app use defined as a consumer launching an app

Source: Flurry Analytics
Entomological Programs

Forest Pests:
- Gypsy Moth
- Emerald Ash Borer

Red Imported Fire Ants

Cotton Boll Weevil

Sweetpotato weevil

Brown Garden Snail Eradication

Blueberry Export Certification
Gypsy Moth ($n \approx 20,000$)

EAB ($n \approx 600$)
Walnut Twig Beetle (40 to 70)

Sweet Potato Weevil (8000 to 10000)
MOBILE TECHNOLOGIES...

Lots and lots of maps to print!!! $$$$$$

NO maps to print!!!
Huge $avings
Implementing these new technologies will...

• Eliminate the need to print maps
• Improve quality control
• Make data transmission more efficient
• Increase accuracy setting traps
• Allow us to run multiple programs simultaneously
• Standardize protocols
• Save a lot of $$$
Our Survey System

- Generate custom made maps
- Store maps in the "cloud"
- Download maps into mobile devices and collect data.
- E-mail data
PDF Maps uses Geo-referenced Pdf files (Geo Pdf) to navigate.

- Allows to easily import custom made maps.

- DOES NOT require internet or cellular connection to navigate and collect data.
How does a GeoPdf map works?

1 Tablet uses its internal GPS to determine actual position (coordinates)
   - Latitude
   - Longitude

2 Location in Geo-pdf map is determined from Lat, Lon readings

Pdf Map highly saturated with coordinates
Thank You

QUESTIONS??

For more information contact the North Carolina Department of Agriculture and Consumer Services Plant Industry Division at (919) 707-3730