Endophytic Fungi in Corn

- *Alternaria* sp.
- *Cladosporium* sp.
- *Epicoccum* sp.
- *Lewia* sp.
- *Cochilobolus* sp.
- *Cryptococcus* sp.
- *Fusarium* spp.
The Cookbook

- The stage is already set
- Students follow the recipe
- Data is collected
- Results are analyzed

Volkmann and Abell, 2003
How can I help students to succeed after graduation?
What do employers seek?

- Motivation
- Organizational skills
- Attention to detail
- Ability to multitask
- Good interpersonal skills
- Ability to follow instructions but also able to work well independently
- Problem solving skills
The Materials
The Table is Already Set
<table>
<thead>
<tr>
<th>Minicentrifuge</th>
<th>Microcentrifuge</th>
<th>Micropipettes</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Minicentrifuge" /></td>
<td><img src="image2.png" alt="Microcentrifuge" /></td>
<td><img src="image3.png" alt="Micropipettes" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Picture</th>
<th>What is that used for?</th>
<th>Special Notes</th>
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</thead>
<tbody>
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</table>
Students are in charge of setting the majority of the material
“This experiment shed light on the types of procedures used to isolate and store various fungi. Sometimes, it’s hard to imagine how scientists get from point A to point B but this class and project has been helpful in illuminating all of the minute procedures and protocols”
Inquiry Based Laboratory Work

- Are learners engaged with scientifically oriented questions?
- Do learners give priority to evidence?
- Do learners formulate evidence-based explanations?
- Do learners compare and evaluate the merit of their explanations?
- Do learners communicate and justify explanations?

Volkmann and Abell, 2003
Fish DNA barcoding
Assessment ???