What Does Claims Management Success Look Like?

- Develop and implement a **customer centric approach** for grower customers purchasing our Xtendimax and Roundup Xtend brands:
  - Base knowledge of claims and issues management processes by all sales and technical teams
  - Rapid response to customer inquiries
  - Clear processes to empower Monsanto and our agents to manage and resolve issues
- Internal and external training and clear setting of expectations
- Manage claims with a consistent and documented process
- Minimal number of claims or issues that require financial settlement
Likely Issues and Resolution

- Off-Site Movement – No Claims Settled → Product Support
  - Label clearly states that the applicator may not spray if there is the risk of off-site movement
  - Label also states the applicator is responsible
- Crop Response – May have claims
  - Key is setting expectations in training and launch
  - Cotton more of an issue
- Lack of Performance – May have claims – EPA mandated response
  - Terms and Conditions of Registration will dictate Monsanto response
  - Label will limit claims to right rate at the right time
  - Follow-ups to “likely resistance” is expected to be minimal
Previous Approved Plans

- Assumptions
  - #Acres/grower = 350A
    - Assumed 10% needed evaluations
    - 17M Soy & 5M Cotton
  - Growers using Xtend chemistry
    - Soybeans: 70%
    - Cotton: 70%
  - FES
    - 30 hr/wk + 6 months
Today's Context

- Increased scale of introductory launch
- Increased system complexity/uncertainty (product to be registered, buffers, tank mixes, additive approvals) with condensed window for execution (registration timing)
- Heightened attention by EPA, State Regulators, Industry and customers for launch year (illegal applications, impacts in 2016)
- Lack of academic confidence/support in VaporGrip and Application Requirements (illegal application impacts in 2016 + no TD/Academic off-site movement research with VaporGrip formulations)
- Customer and State objectives are to manage for zero offsite symptoms
Call/Dispatch Center

Overview: 1-800-RoundUp

DRAFT for review
Expenditure Timeline
Field Engagement Specialists (FES) and HGS Call Center Staff

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S O N D J F M</td>
<td>A M J J A S</td>
</tr>
<tr>
<td>June</td>
<td>$3.3K</td>
<td>FES training</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FES deployment</td>
</tr>
<tr>
<td>June</td>
<td>$1.3K</td>
<td>FES designed</td>
</tr>
<tr>
<td>June</td>
<td>$32K</td>
<td>for application</td>
</tr>
</tbody>
</table>

Variable Spend
- HGS claims/queries
  - Up to $5.7M
- HGS dispatch
  - Up to $166K

Total
- Up to $5.7M
- Up to $166K
- $7.7M
- $175K

- FES' s estimates 166
- 2 weeks total
- Geographic gradient for FES deployment into the field beginning of Feb. (4 weeks)
- HGS training and implementation for dispatch in January
- FESs provide grower ‘touch’ during planting and field day season
Overall Resource and Funding Request for FES – RXCS/Headcount

- FES number is based upon 20% of Xtend/Xtendimax chemistry customers
  - Assumption: 1 in 5 MON chemistry purchasers will call and warrant a visit
    - Weed Control, Crop Injury, Off-Site Movement
- NEW Assumptions
  - Aug. 2016 - $7.65M
    - Assumed 10% needed evaluations
  - 2016 M Soy A 6M Cotton
  - Growers using Xtend chemistry
    - Soybeans 70%
    - Cotton 50%
  - FES
    - 40/week - 7 months
- OVERALL Budget Request:
  - FES - $7.65M
  - 3 FTE - Cell Dispatch - $1.75k
  - 2 FTE – Crop Protection Engagement Managers

* Cotton was used for Kmax; Corn was used for Zea. Cotton - 85%
  - Wheat 35 Acres, Soy - 85 Acres, Zea - 170 Acres

<table>
<thead>
<tr>
<th>Category</th>
<th>2017-18 Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>$7.65M</td>
</tr>
<tr>
<td>Xtend &amp; Headcount</td>
<td>$5.2M</td>
</tr>
<tr>
<td>Cotton</td>
<td>$1.95M</td>
</tr>
<tr>
<td>Soybeans</td>
<td>$1.3M</td>
</tr>
<tr>
<td>Cotton</td>
<td>$1.3M</td>
</tr>
</tbody>
</table>

Note: Resource details not fully visible in the image.
Crop Protection Engagement Managers

December 2016:
- Approved plan provided for 4 total headcount for calendar 2016 contingent on EPA approval (2 re-positioned, 2 incremental)
- Repositioned 2 (Allen, Curvey). Did not hire incremental HC.

REQUEST:
- 2 incremental HC contingent upon EPA label approval for calendar 2017. Address US and Canada Xtend Launches

ROLE
- Provide leadership, expertise, knowledge and process management to address issues
- Key responsibilities:
  - Education and Training
    - Content and resources
    - Deliver Application Requirements education
    - Train Field Engagement Specialists
  - Manage the processes related to claims handling
  - Direct and provide expert counsel to Field Engagement Specialists
  - Track, manage and report inquiry information
  - Resource for challenging situations that cannot be resolved locally or at the next level
  - Ensure EPA mandated WARM implementation or other potential mandates

FUTURE
- Maintain CEM roles as necessary pending trait adoption and EPA mandated reporting
- Evolve portion of team into Crop Protection/PAS inquiry management and/or transition roles into other responsibilities or positions.
BACKUP
## Probabilities of Malformation at 28 DAT

<table>
<thead>
<tr>
<th>Distance</th>
<th>Likelihood of malformation exceeding 10%*</th>
<th>Likelihood of malformation exceeding 15%*</th>
<th>Likelihood of malformation exceeding 20%*</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 ft</td>
<td>52% (47%-58%)</td>
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</tr>
</tbody>
</table>

* Numbers in parenthesis are 95% confidence bounds on likelihood
• The overall plateaus were calculated using a linear mixed model (JMP 9.0) using the location by treatment means. There were not significant differences between nozzles except for early malformation. Due to this overall plateaus for each response were calculated using the intercepts (grand means) estimates in the models.

• Willis location was not used in the malformation across location calculations since distance to 5% and 15% malformation was not achieved.

• If a yield plateau could not be detected, the distance to the first sampling plot is used therefore the overall yield plateau distance is conservative.
PROPOSAL: Xtend Launch Key Deliverables

Next 90-120 Days:

Divert resources to Critical Launch Deliverables:

- Academic Stakeholder Outreach CAREY
  - Information sharing/outreach (WM/EBR enablement, Academic Summit, Industry Meetings, Host Visits) [Y]
  - Execute funding support of state Application Requirements training by academic extension [Y]
  - Extensive 2017 academic trial program with UpliftGrip formulations including OSU [R]*

- Application Requirements Training PARIS
  - Technical content (BMI200) [Y]
  - Final delivery modules [Y]
  - Plan delivery and execution [R]

- Inquiry/Management WITTEN
  - Policy and system finalization and approval [Y]
  - Organization and FES (Field Engagement Specialists) onboarding/training [Y]
  - Plan delivery and execution [R]

Resources Diverted/Dedicated
- Carey
- Paris
- Witten
- Allen (FES)
- Covery (FES)
- Noble (FES)
- Foote (FES)
- Factor (FES)
- Funding (contract support/programs)

120 Days through launch:

- November decision on incremental resource investments based on EPA registration and introductory launch assays:
  - Increase Field Engagement Specialists (FES) program: $7.60M (vs. $2.8M existing program allocation)
  - Incremental HOS staff for 1-800 ROUNDUP control call and FES dispatch: $350k (vs. no existing program allocation)
  - Two incremental Crop Engagement Manager HC and operating expenses to execute key deliverables and manage inquiries/reporting $500k (1 new + decision point on 2nd half FY17)
## 2017 - Crop Plan

### NEW ASSUMPTIONS

<table>
<thead>
<tr>
<th>Variable</th>
<th>LSP</th>
<th>Budget</th>
<th>MAX</th>
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</thead>
<tbody>
<tr>
<td>Treated Acres (M ac)</td>
<td>21</td>
<td>24.4</td>
<td>32.5</td>
</tr>
<tr>
<td>Soybean Beaded</td>
<td>8.8</td>
<td>12.1</td>
<td>16.0</td>
</tr>
<tr>
<td>Soybean Corn States</td>
<td>3.4</td>
<td>3.4</td>
<td>3.4</td>
</tr>
<tr>
<td>Soybean (PO+SM)</td>
<td>1.9</td>
<td>4.9</td>
<td>8.3</td>
</tr>
<tr>
<td>Cotton</td>
<td>3.0</td>
<td>3.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Treated Acres (M ac)</td>
<td>20.5</td>
<td>23.9</td>
<td>33.3</td>
</tr>
<tr>
<td>Al Share</td>
<td>75%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Dicamba (M lbs)</td>
<td>13.1</td>
<td>18.3</td>
<td>23.3</td>
</tr>
</tbody>
</table>

(Mokate Company Confidential)
Flow for MON Chemistry

Xtend/XtendiMax Customers

Xtend/XtendiMax

MON Branded Seed

- Crop Response
- Weed Efficacy
- Off Site Movement

- Visit

NON-MON Brand Seed

- Crop Response
- Weed Efficacy
- Off Site Movement

- Visit

~50-65% of all calls in these categories
Flow for NON-MON Chemistry

NON-Monsanto Chemistry

Crop Response → MON Branded Seed → Visit

Chemistry Performance → NON-MON Brand Seed → NO Visit

Off-Site Movement → Weed Efficacy → NO Visit

20-25% of all calls in these categories
Commercial AG Crop & NON-Ag/Urban

- NO Visit

Commercial AG Crop

MON Customer

Visit

NON-MON Customer

NON-AG/Urban

NO Visit

~5-10% of all calls in these categories

~<5% of all calls in these categories

 Montero/Correa Confidential
Updated Evaluation in Assumptions for 2017 Launch

Key Assumption Changes
- Increase Call/Dispatch from 10% to 20%
  - No customer, dealer, applicator experience
  - Increased customer awareness and expectations for product performance and off-site movement
  - Increase in MON chemistry footprint
  - Increased FES time from 30 to 40hrs/wk and 6 to 7 months


**Inquiry/Evaluation Process**

**Overall Objectives**

- Plan provides:
  - Local support for successful launch and sustainability of Xtend franchise FTO
  - Support to MON customers
    - Customer service
  - Anticipates potential increased regulations mandates from EPA
  - Internal educational opportunity and increased knowledge base
    - Enables proactive improvement and stewardship
  - Localized resources to assist CAMs, TCRs, Agronomists, & ABMs

- Field Engagement Specialist (FES)
  - EVALUATION is key
  - Role of FES is NOT to settle claims
  - Have the opportunity to contribute to positive customer experience
  - Will gather information and offer opportunity to educate during visits

- Overall plan is designed to be proactive and tiered to align with chemistry approval process (customer centric)
  - Will align FES with 2017 crop plan to ensure proper deployment of resources
  - Scaling of hires to anticipate milestones prior to 2017 planning
Comprehensive Malformation Analysis of Large Scale Dicamba Spray Trials from 2012 and 2013

Statistical analysis by Kirk Remund
Objective

Calculate the likelihood of a grower observing soybean malformation at 10%, 15% and 20% at 100, 150 and 200 feet downwind of the spray plot.
Background Information

- The data used in these calculations is from 22 independent academic and TD large scale dicamba spray application trials from 2012 and 2013.

- The physical location, wind speed, nozzle and other environmental conditions varied from one independent application to another.
Background Information

- The **average malformation across transects for each location and sampling distance is used** as the response in this analysis to satisfy the assumption of independence and to represent a "growers view" of the field.

- Some TD study leaders did not record malformation at longer distances where no malformation was observed in the field. Zero percent malformation was added to the data for these longer distances to properly reflect what was observed in the field (with the exception of the Willis location).
Statistical Methods

- A binary response of whether malformation exceeds the target levels of 10%, 15% and 20% or not for each independent application and distance used in this analysis.

- A generalized linear model (logistic regression) with a binary response and a logit link was used to estimate the likelihood (probability) of exceeding the target malformation levels for large scale spray applications at various distances downwind from the spray plot. Confidence intervals are also provided. JMP Version 10 was used for the data analysis. A generalized linear mixed model with a random location effect was considered but model convergence was not obtained.

- A re-sampling bootstrapping method in R was used to confirm the results from the generalized linear model.
Application Information

- Single swath of a spray boom OTT RR2Y
- Most with XC and UC droplets, using a Drift Reduction Agent
  - Applied 0.5 lb ae/A dicamba and 1.0 lb ae/A glyphosate
- Application requirements followed
  - Most tests with wind speeds 5-8 mph
- Applications with Monsanto WMTDR oversite
  - Experienced agronomists making visual assessments
## Probabilities of Malformation at 14 DAT

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<tr>
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Technical Recommendations

- Monsanto standard for Over-The-Crop safety has been 10%
- Downwind Soybeans, legumes, sugarbeets:
  - Using 15% malformation as the trigger to elicit a phone call:
    - 145 ft buffer results in 13% potential complaints
    - 100 ft buffer results in 29% potential complaints
- Downwind Cotton:
  - Data indicates 100 ft is more than acceptable
  - Develop dataset to support a 50 ft buffer
- Consider an increased buffer when high value sensitive crops are near DT crop fields:
  - rural communities, homesteads, nurseries, greenhouses, vineyards, melons, tomatoes, etc.
  - 250 ft recommended buffer based upon distances to 5% soybean malformation as trigger for complaints