

### Risk Maps & Summary 2018 Corn Rootworm Beetle Monitoring



# Overall Distribution of Trapping Locations

2018 Corn Rootworm (CRW) Beetle Monitoring

CRW 2018 Data, All Fields (N=1499)





Breakdown by Crop Sampled: Corn vs. Soybean





### Binning and Mean Value Determination





Interpolation of Binned, Averaged Values



Opting for Radial Bessel Function (RBF) w/ Linear Kernel over Inverse Distance Weighting (IDW)

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### **Overall Summary**

Average Beetles per Trap per Day Summarized By Crop and Rotation<sup>1</sup>



Sources:

<sup>1</sup>Data in this graph is the result of field trials conducted on 1499 field plots in 10 different states in 2018.

<sup>2</sup>Hodgson, E. 2016. Guidelines for using sticky traps to assess corn rootworm activity. Integrated Crop Management. Iowa State University.

https://crops.extension.iastate.edu/cropnews/2016/06/guidelines-using-sticky-traps-assess-corn-rootworm-activity

### Estimated Risk of Damaging Corn Rootworm Populations in 2019

Areas in Red are estimated to have potential risk of above action threshold populations<sup>1</sup>.



#### Sources:

<sup>1</sup>Hodgson, E. 2016. Guidelines for using sticky traps to assess corn rootworm activity. Integrated Crop Management. Iowa State University. <u>https://crops.extension.iastate.edu/cropnews/2016/06/guidelines-using-sticky-traps-assess-corn-rootworm-activity</u>.

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CRW 2018, Corn Fields<sup>2</sup>

#### Sources:

<sup>1</sup>Hodgson, E. 2016. Guidelines for using sticky traps to assess corn rootworm activity. Integrated Crop Management. Iowa State University. <u>https://crops.extension.iastate.edu/cropnews/2016/06/guidelines-using-sticky-traps-assess-corn-rootworm-activity</u>

<sup>2</sup>Field trials conducted on 1177 Corn field plots in 10 different states in 2018.

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#### Sources:

<sup>1</sup>Hodgson, E., and Gassmann, A. J. 2016. Guidelines for using sticky traps to assess corn rootworm activity. Integrated Crop Management. Iowa State University. <u>https://crops.extension.iastate.edu/cropnews/2016/06/guidelines-using-sticky-traps-assess-corn-rootworm-activity</u>

<sup>2</sup>Field trials conducted on 322 Soybean field plots in 10 different states in 2018.

# Comparison Over Years Shows Similar Areas of High Risk

Significant Increases in Some Areas

2017 beetle counts on corn fields (Based on 1286 fields)

#### 2018 beetle counts on corn fields (Based on 1177 fields)





Denotes hotspot similarity between 2017 & 2018

Denotes increased risk 2017 to 2018

# Conclusions and Next Steps

- // Total number of fields and geographies sampled continues to increase over years
  - // Improved distribution and potential to estimate landscape-level risk.
- // Consistent methodology over years allows for relative estimation of high risk areas over time
  - // High risk areas similar from 2017 to 2018 with some expansion in Illinois and Indiana
  - // Slight increase in percentage of fields sampled above ISU threshold (2 beetles/trap/day).<sup>1</sup>
- // CRW monitoring efforts expected to continue in 2019.

Sources:

<sup>1</sup>Hodgson, E. 2016. Guidelines for using sticky traps to assess corn rootworm activity. Integrated Crop Management. Iowa State University. https://crops.extension.iastate.edu/cropnews/2016/06/guidelines-using-sticky-traps-assess-corn-rootworm-activity

### **Legals**

A BAYEF

For additional agronomic information, please contact your local brand representative. The information discussed in this report is from a multiple-site demonstration trial. This informational piece is designed to report the results of this demonstration and is not intended to infer any confirmed trends. Please use this information accordingly. **Performance may vary**, from location to location and from year to year, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on the grower's fields.

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