

## Non-substantive Change Request

### 0535-0245 - Conservation Effects Assessment Project (CEAP)

In 2003, Monsanto introduced a new strain of genetically modified, insect resistant (Bt) corn seeds. *Bacillus thuringiensis* or Bt is a bacterium that occurs naturally in the soil and produces proteins that kill certain insects. Unlike previous products, which only controlled corn borer infestations, Bt-CRW seeds also controlled corn rootworms.

Unexpectedly severe yield losses were first reported on fields planted with Bt-CRW corn in 2009. By 2011, resistance had been reported in Illinois, Iowa, Minnesota, Nebraska, and South Dakota. In 2012, a group of twenty-two entomologists wrote a public letter advising that the EPA take urgent and immediate action.

In 2015, the EPA proposed a new framework for rootworm resistance management.<sup>1</sup> New rules would mandate crop rotations, the use of seeds which produce multiple Bt toxins, and other Integrated Pest Management Strategies. However, there is still a good deal of uncertainty about the scale and the scope of the rootworm resistance problem. Therefore, it is not clear that new framework is sufficiently robust.

Recently, economists at the USDA's Economic Research Service (ERS) have used structural models of farmers' pest control decisions to study rootworm resistance in US corn fields. Preliminary results suggest that resistance had not developed as of 2010.

Unfortunately, ongoing research by ERS economists is constrained by limitations in the available data. Though a new Agricultural Resource Management Survey (ARMS) is planned for 2016, data isn't available for 2011-2015. Additionally, unlike the CEAP survey, the ARMS survey (OMB # 0535-0218) does not follow the same farmers over time. This makes it difficult to control for latent, farmer specific variation.

Adding a single question to the NRCS Conservation Effects Assessment Project (CEAP) survey would allow USDA economists to explore how seed choices (and insecticide use decisions) affect the rate at which rootworm resistance develops. In addition a minor revision to question F-6 would allow USDA economists to study glyphosate resistance (in weed populations).

Because the CEAP survey is a detailed source of information, due to it following the same famers over time, and because the rootworm resistance problem intensified dramatically from 2012-2014, small changes to the CEAP survey could pay large dividends in USDA research.

On the following page are the non-substantive changes NASS would like to make to the current approval.

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<sup>1</sup> [http://www.epa.gov/oppfead1/cb/csb\\_page/updates/2015/corn-rootworm-news.html](http://www.epa.gov/oppfead1/cb/csb_page/updates/2015/corn-rootworm-news.html)

In **Section F** – Pest Control Applications (CEAP Questionnaire)

Currently NASS is approved to ask:

6. **Did you select and plant crop cultivars with genetically engineered tolerances to specific herbicides such as glyphosate or glufosinate?** .....

Yes = 1

0350
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Revised Question

2. **In 2015, 2014, or 2013, did you select and plant crop cultivars with genetically engineered tolerances to specific herbicides such as glyphosate or glufosinate?** .....

Yes = 1

	2015	2014	2013
	0350	xxxx	xxxx

New Question

3. **In 2015, 2014, or 2013, did you select and plant crop cultivars with genetically engineered traits for:**

- a. rootworm resistance? .....
- b. other insect resistance (Bt)? .....

Yes = 1

Yes = 1

	2015	2014	2013
a.	xxxx	xxxx	xxxx
b.	xxxx	xxxx	xxxx