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Sent: 11/16/2012 8:02:38 PM
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BCC: scott.jackson@basf.com; wendy.bair-johnson@basf.com; andrew.goetz@basf.com
Subject: Proposed talking points to address EPA request for dicamba field volatility data.docx
Attachments: _.gif

Linda and Helen,

I have put together a list of talking points that we can consider using with EPA, with the objective of convincing EPA that volatility is not a contributing factor to the off target plant injury from dicamba and that the volatility myth can be explained by physical drift.

Have great weekend and we will talk on Monday morning.

Jeff

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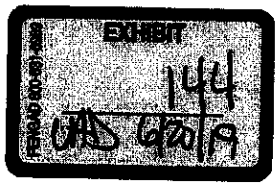

Proposed talking points to address EPA request for dicamba field volatility data

Dicamba by definition is not a volatile substance.

What regulatory data point does EPA reference to qualify dicamba as volatile?

Accepted regulatory studies such as aerobic soil metabolism studies, clearly demonstrate in a very strict mass balance approach that dicamba is not volatile.

Similar EU regulatory studies, conducted in phytotrons, with carbon 14 labeled dicamba applied to both soil and plant surfaces also fail to demonstrate any significant loss of dicamba as a volatile substance.

It is widely accepted within the agricultural and academic communities that dicamba is a volatile substance similar to 2,4-D and other synthetic auxin herbicides. This belief, however, is based on historical experiences and observations from dicamba use and not from validated scientific measurements.

The extreme dicamba sensitivity of commonly grown crops, such as soybeans can cause observers to conclude that volatility is the only possible explanation, when in fact the injury it is caused by physical drift. The volatility myth has been further reinforced by the often slow development of injury symptoms in sensitive crops; sometimes taking one to two weeks for injury symptoms to become visible. Once the injury is observed, the possibility of a two week old application being responsible is never considered and the injury is incorrectly attributed to the movement of a volatile cloud of dicamba from some recent unknown dicamba application.

Dicamba has been used as a herbicide for over 40 years and during much of that period very little attention was given to minimizing physical spray drift. With the common use of flat fan nozzle technology during that period, a large percentage of the applied herbicide mixture was released as very small spray droplets (fines) that in many ways can mimic the movement of a volatile substance. The relatively careless use of dicamba and the release of dicamba to be carried by very fine spray droplets only served to reinforce the dicamba volatility myth.

Physical movement of dicamba, via wind-blown soil can also cause plant injury to be observed that is inconsistent with what is expected from the wind conditions during or soon after the dicamba was applied. The injury is often wrongfully attributed to volatility; perpetuating the perception that dicamba is volatile.

Continued improvements in dicamba formulation technology have also reduced the potential for physical drift by improving those physical characteristics that further contribute to the formation of fewer very fine spray droplets.

The use of dicamba should be regulated based on its potential for physical drift. Plant injury from the off target movement of dicamba can be minimized through the use of label restrictions that clearly limit the use of nozzles to those that produced almost no very fine droplets, limits on maximum wind speed, boom height and applicator travel speed and the prudent use of spray buffers to protect sensitive plants growing downwind from the application sight.