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Kansas Conclusions Wrong?

The Study EPA Didn't Want You to Hear About In the 2,4-D Debate

There is new evidence that the conclusions reached in the widely publicized National Cancer Institute and University of Kansas epidemiology study that links herbicides—especially 2,4-D—to cancer may be incorrect. EPA has used the study to warn of a possible special review of 2,4-D, perhaps the first step toward product cancelation.

But with help of the Freedom of Information Act (FIA), *AB* was able to obtain a copy of a review of the Kansas study, as it is now commonly called. EPA has tried to suppress this study, issuing from the Harvard School of Public Health, even though EPA itself commissioned it.

As was widely reported at the time (see *AB*. vol. 4, no. 17), the National Cancer Institute and University of Kansas epidemiology study said that farmers exposed to herbicides for more than 20 days each year had six times the risk of developing non-Hodgkin's lymphoma (NHL) compared to nonfarmers. Among those who mixed or applied the herbicides themselves, the risk was eight times greater, the study claimed.

Upon release of the study, EPA immediately announced (on Sept. 22) plans for a possible special review of 2,4-D, adding, "EPA... believes that [the study] is well thought out and that the conclusion are supported by the data."

But how confident was EPA? Because EPA does not have an epidemiologist on their staff to do a proper evaluation of the study, it commissioned Brian MacMahon, professor and chairman of the department of epidemiology, Harvard School of Public Health, to review the Kansas study.

Material gained under the FIA shows that MacMahon did not complete his review until Sept. 29, a full week after EPA had already warned of a possible special review of 2,4-D and had said with confidence the agency fully supported the Kansas study's conclusions.

Yet after the Harvard professor's review was available, EPA refused to release the results. Now for the first time in public print, here are key points made in the review of the Kansas study:

- "In my opinion the weight of evidence does not support the conclusion that there is an association between exposure to 2,4-D and NHL."
- In "a high proportion of subjects (50 percent of cases of soft-tissue sarcoma (STS) and NHL and their controls), the exposure information was obtained from surrogates since the subjects themselves were dead. One would suspect that surrogate-supported information on occupation would be reasonably accurate, but one must question surrogates' knowledge of what specific herbicides were used and on how many days of the year.
- "I do not believe that the authors' conclusion that 'the study confirms the reports from Sweden and several U.S. states that NHL is associated with farm pesticide use, especially phenoxyacetic acids' is justified.
- "Taken as a whole, I believe that the weight of evidence indicates that an association between 2,4-D and NHL remains a hypothesis that is still to be tested. I am unwilling to speculate as to whether 2,4-D causes NHL (or some cases of NHL) until the evidence is clear that there is an association between them."

Taking Sides: Who says only Big Business likes to keep information from the public? Like MacMahon, *AB* believes that the link between 2,4-D or other herbicides and NHL is only an unproven hypothesis. The bad news is that press coverage and EPA have already convinced the public that 2,4-D should be canceled. Let's hope that bringing the truth to light can slow or stop the special review.

Split-Finger Fastball

I have written in the past about the growing antichemical snowball. The continuing shift of the chemical decisionmaking process to the state level suggests that the snowball is starting to hit hard. In fact, it is being used as a split-finger fastball. It's as hard to nail as the pitch of Mike Scott of the Houston Astros.

Oh yes, the shift to state decisionmaking has been encouraged by the downfall of the FIFRA amendment and has been further verified by the passing of Proposition 65 in California by a margin of 67 percent to 33 percent. Among Prop. 65's provisions is a statement that no one shall release a cancer-causing chemical in virtually any amount into any water system. This trend won't end in California. In fact, the National Campaign against Toxic Hazards is already setting up campaigns in 15 other states using a "generic" version of the California proposition.

Hold it. This is a story for another day. What we in the agrichemical industry need to know is just how this split-finger fastball is thrown? Why is it that every chemical company at bat strikes out?

To learn about the split-finger fastball, I picked an antichemical snowball that had the potential, in the right hands, of becoming a fastball. I'm speaking of the recently released National Cancer Institute and University of Kansas epidemiology study that links herbicides, especially 2-4-D, with increased cancer rates. Specifically, it said that farmers exposed to herbicides for more than 20 days each year had six times the risk of developing non-Hodgkin's lymphoma compared to nonfarmers. Among those who mixed or applied the herbicides themselves, the risk was eight times greater, the study said.

Get ready for the split-finger fastball. Upon publication of the study, EPA immediately announced (on Sept. 22) plans for a possible special review of 2,4-D, adding, "EPA... believes that [the study] is well thought out and that the conclusions are supported by the data."

But how confident was EPA? To start with, EPA does not have an epidemiologist on their staff to do a proper evaluation of the study. Moreover, EPA commissioned Brian MacMahon, professor and chairman of the department of epidemiology, Harvard School of Public Health, to review the "Kansas study," as it is now commonly called. But please note that MacMahon did not complete his review until Sept. 29, a full week after EPA had already announced its plans for a possible special review of 2,4-D and had said with confidence that the agency fully supported the study's conclusions. Wow—those split-finger fastballs move in mysterious ways.

But what did the MacMahon review say? Strike two. EPA wouldn't say or release the results, even though taxpayers like you and me paid for the evaluation. Who says only Big Business likes to keep information from the public? As I say, these split-finger fastballs are real hard to catch. But with the help of the Freedom of Information Act, AGRICHEMICAL AGE was able to obtain a copy of the MacMahon review.

Oh, the MacMahon review probably won't save the game, but it may prevent an EPA grand slam. Here are key points made in the Harvard professor's review of the Kansas study:

- "The key question... is in fact two questions—what does the 'weight of evidence' say about the risk of lymphoma for agricultural workers exposed to 2,4-D; and is 2,4-D a likely cause of lymphoma? The second question cannot be answered (except perhaps by animal experiment) until the first is answered, since without an association there is no causation."
- "In my opinion the weight of evidence does not support the conclusion that there is an association between exposure to 2,4-D and non-Hodgkin's lymphoma (NHL)."
- In "a high proportion of subjects (50 percent of cases of soft-tissue sarcoma (STS) and NHL and their controls), the exposure information was obtained from surrogates since the subjects themselves were dead. One would suspect that surrogate-supplied information on occupation would be reasonably accurate, but one must question surrogates' knowledge of what specific herbicides were used and on how many days of the year."
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As noted, a team that loses to a split-finger fastball pitcher still loses. It does help the batter, however, to know what to expect and who pitches the fastball. It may also help the general public in cheering the right team.

But don't jump to wrong conclusions. While EPA may be playing fast and loose with this and other cases, there are a lot more split-finger fastball pitchers out in the minor leagues (that is, state agencies) that would just jump at the chance to take on the chemical companies. Let's support one federal EPA, but let's play that agency close to the plate.

Agrichemical Age
A national publication for fertilizer and pesticide dealers, applicators and consultants.

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FOR IMMEDIATE RELEASE

HARVARD PROFESSOR QUESTIONS STUDY LINKING 2,4-D WITH CANCER

There is new evidence that the conclusions reached in the widely publicized National Cancer Institute and University of Kansas epidemiology study that links herbicides - especially 2,4-D - to cancer may be incorrect, according to a copyrighted article in the December, 1986 issue of Agrichemical Age, a national trade publication. EPA has used the study to warn of a possible special review of 2,4-D, perhaps the first step toward product cancelation.

But with the help of the Freedom of Information Act (FIA) Agrichemical Age was able to obtain a copy of a review of the Kansas study, as it is now commonly called. EPA has tried to suppress this study, issuing from the Harvard School of Public Health, even though EPA itself commissioned it.

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