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November 20, 2007

[redacted]

Public Information and Records Integrity Branch (PIGIG)
Information Resources and Services Division (7502c)
Office of Pesticide Programs (OPP)
Environmental Protection Agency
120-0 Pennsylvania Avenue, N.W.
Washington, DC 20460

Re: Comments on the Aldicarb Reregistration Eligibility Decision and Notice of Availability (Docket ID Number EPA-HQ-OPP-2005-0163)

To whom it may concern:

[redacted]

I am writing in response to the request by the EPA for public comment regarding the reregistration of aldicarb and the cancellation of use on tobacco. I can not agree that cancellation of the 24(C) Supplemental Label for tobacco in Virginia is warranted. Aldicarb has a long history of use on tobacco in Virginia and the product has provided tobacco growers with very good results, has not resulted in harm or injury to applicators, and according the Virginia Department of Agriculture and Consumer Services has not been implicated in any case of accidental wildlife mortality. Aldicarb or Temik 15G is a restricted use pesticide and must be applied by certified pesticide applicators. If such certification is considered of any value, then we must consider tobacco growers applying aldicarb as competent to do so in a safe manner and to follow all pesticide label requirements. I routinely speak with growers regarding the use of Temik and would like to convey the observation that growers appreciate the hazards associated with the compound and give its use all due consideration.

[redacted]

I take exception to the EPA memorandum dated September 6, 2007 on the subject of the use of aldicarb for aphids and flea beetles on tobacco. I believe that the calculated Risk Quotients for aquatic species and wildlife presented in the memo overstate the actual risk. The output results presented on page 9 of this memo use a row width of 60 in. and a treated band width of 6 in. A row spacing of 48 in. is more typical for tobacco and no one uses a 60 in. row. The 6 in. band width results in a doubling of the dosage concentration compared to the actual treated band width of 12 to 14 in. However, my concern is the assumption that 100% of the product is unincorporated into the soil and thus left exposed on the soil surface. This assumption has no basis in fact and is an obviously violation of the label. These input assumptions are in contrast to those shown on page 6 (48 in. row spacing, 12 in. band width, and 15% unincorporated). Aldicarb is applied with the bedding operation of a field prior to transplanting and is applied in a band immediately ahead of the raised bed being formed. I would suggest that there is only a minimal quantify that is not incorporated at the end of the rows where the equipment exits the field. I feel that a label requirement for the use of a direct-drive, positive displacement applicator is reasonable to further minimize the possibility of any unincorporated product at the end of a row.

[redacted]

In examining Table 1 of the EPA's Reregistration Eligibility Decision for Aldicarb it is interesting to note that the maximum RQ's for tobacco are essentially no different from other field crops grown in the southeast U.S. (cotton, peanuts, and soybeans) with the assumption of 85% product incorporation. Tobacco was not included in Table 2 where 99% incorporation was assumed. I am suggesting that such an omission was an error and does not reflect how the product is actually used in tobacco.

Temik 15G was used on approximately 8 to 10% of the flue-cured tobacco acreage in Virginia in 2007. Traditionally, aldicarb has played a vital role in the management of aphids and flea beetles. The product is also a potentially important tool in a management program for nematodes, for which it is also labeled. Use of the product has declined significantly since the introduction of imidacloprid for tobacco and the adoption of multi-purpose fumigants necessary to combat bacterial wilt in certain areas. However, over the past 2 to 3 years, we have begun to encounter an increased incidence of nematodes problems where imidacloprid has been substituted for aldicarb solely for aphid and flea beetle control. For these affected growers, aldicarb represents the only available management option short of fumigation. The use of soil fumigants for nematodes alone is very expensive and is becoming increasingly problematic from a regulatory standpoint and there are added issues of applicator safety. I consider aldicarb as the most appropriate option for a number of growers in the event that chemical control of nematodes becomes necessary for their tobacco production.

Thank you for considering my comments for flue-cured tobacco producers in the Commonwealth of Virginia. If I can be of any assistance please contact me.

Sincerely,

T. David Reed

T. David Reed
Extension Agronomist, Tobacco

[redacted]

Comment [CSJ1]: Doug Edwards of VDACS told me that he checked with all of the appropriate pesticide inspectors, and there are no reported "incidents" of wildlife poisoning in Virginia from use of this 24c label for tobacco.

[redacted]

... [1]

[redacted]

The purpose of this letter is to comment on EPA's re-registration eligibility decision (RED) for aldicarb, and specifically the voluntary cancellation of aldicarb registration for tobacco. My understanding is that this cancellation was initiated by EPA, prompted by a lack of public comment in support of tobacco use and by the high risk quotients calculated by EPA for acute risk for birds and mammals. In actual fact, aldicarb is a significant and highly valued IPM tool for tobacco production in Virginia. The only reason for the lack of public comment was that the tobacco industry in Virginia was unaware of the need for such input to EPA. My comments should at least in part rectify this deficiency, and are based upon 22 years of experience researching nematode control on tobacco and extending results of this work to Virginia farmers.

Although Virginians routinely rotate tobacco production and plant resistant cultivars to minimize losses, nematode population densities remain at damaging levels in many fields. Surveys of local agrichemical dealers indicate that aldicarb was applied to 5-10% of the flue-cured tobacco acreage in Virginia (900-1,800 acres) in 2007. Extensive field research in Virginia indicates an average increase of 14% in yield and 18% in gross economic returns from applying aldicarb to control nematodes in tobacco fields. These increases result in an estimated average annual economic benefit to Virginia farmers of approximately $500,000 to $1,000,000 from use of the current special local needs registration for aldicarb. Growers' need for aldicarb may actually be increasing, because some growers who switched from aldicarb to neonicotinoid insecticides for aphid control are now experiencing significant losses due to resurgent populations of lesion nematodes (*Pratylenchus* spp.) and more aggressive root-knot biotypes (primarily *Meloidogyne arenaria* and races 2 and 4 of *M. incognita*). Resistant cultivars are not available for these pests, and soil fumigation is not an option for many of these growers.

Soil fumigation is problematic in the Piedmont areas of Virginia, where the heavier soils and slightly cooler climate significantly narrow the windows of time when soil conditions are appropriate for fumigant application. Fumigation delays planting by an additional 14 days compared to aldicarb use, increasing risks of soil erosion from treated fields. Fields tend to be smaller and may tend to be closer to potentially sensitive sites compared to fields in the Coastal Plain, where soil fumigation is more typical. Applicator and handler safety is probably the most common reason cited by tobacco farmers who choose to apply aldicarb for nematode control versus the soil fumigants. These smaller acreage farmers feel better equipped to apply Temik safely using the closed Lock and Load system. With the removal of fenamiphos from the marketplace in 2007, aldicarb remains the only contact nematicide available to these farmers.

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Consequently, I believe the Agency seriously underestimated the value of aldicarb use for tobacco when rendering its decision.

EPA's calculated risk quotients for acute toxicity (EPA memo: docket ID EPA-HQ-OPP-2005-0163-0201) are also based upon a flawed assumption. T-REX input parameters for aldicarb and tobacco correctly list a maximum product application rate of 20 lb/acre, a 48-inch row spacing, and a product band width of 12 inches (Appendix A, page 6). However, the % incorporated parameter is incorrectly specified as 85%, which would amount to product granules being left exposed on the surface of the ground on 1,634 linear ft/acre ([43,560 sq. ft./acre]/4 ft row spacing = 10,890 linear ft of row/acre). However, aldicarb is applied simultaneously with the formation of tobacco beds (rows) prior to planting. The product is dropped through banding equipment 12-24 inches above the soil surface, just ahead of discs that form each bed.

Consequently, product granules are distributed in an approximate 12-inch band that is covered by 6-12 inches of soil as beds are formed, resulting in a "percent incorporation" of virtually 100%. This application is essentially the same as that described as "T-banded" or "In-furrow, drill, or shanked-in" in Table 2-1 of EPA's Users Guide to T-REX Version 1.2.3, where the assumed incorporation is specified as 99%. Granules can sometimes be found near the ends of rows for a variety of reasons, but a realistic worst case estimate would be occasional exposure of granules along the last 3 ft of row. If granules were exposed on **every** row (which I have never seen or heard of), the total exposure would constitute 156 linear ft/acre (3 ft of exposure/row * 52 rows/acre at the most common row spacing of 48 inches). Consequently, the 85% incorporation estimate artificially inflates the estimated granule exposure by a factor of 1634/156 = 10.47. The percent incorporation for my hypothetical worst case scenario (based on 22 years of observation and application experience) would constitute (10,890-156) /10,890 = 98.6%. Assuming a 99% incorporation rate for aldicarb application would thus be a far more accurate estimate of real-world "worst-case" application, and would significantly reduce the LD50/sq.ft. estimates in Table 5 on page 5 of the EPA memo by as much as 15 times. The resulting much lower calculated risk quotients would compare favorably with the other uses listed in Table 5, and more importantly, seem consistent with actual experience in Virginia. Records of the Office of Pesticide Services of the Virginia Department of Agriculture and Consumer Services do not contain a single report of wildlife poisoning resulting from use of aldicarb for tobacco, despite use of the product since 1982 (25 years). While the RED appropriately notes that such negative evidence can't prove poisonings have never occurred, how much actual risk (probability of poisoning and mortality) can there be if significant use over such an extensive time period has **never** resulted in a single documented case?

Even more significant errors regarding aldicarb use in tobacco fields seem apparent in the T-REX output results presented on page 9 of the memo. In the interest of accuracy, I hope that EPA will correct these errors. Comparing the inputs listed for the LD50 ft-2 calculations on page 9 with footnote 7 on page 5 of the memo strongly suggests that the input parameters for aldicarb application for coffee are incorrectly presented for the tobacco calculations, with the exception that 14.7 lb of **product** are applied to coffee (footnote 7, page 5), but the T-REX model input parameter for both tobacco and coffee is presented as lb **active ingredient**/acre. Since the Temik formulation is 15% aldicarb, 14.7 lb of product per acre would be equivalent to 2.25 lb ai/acre.

I appreciate EPA's efforts to more appropriately balance the risks and benefits associated with pesticide use. However, the Agency's estimated benefit in this case was significantly underestimated and the risks were dramatically overestimated. The information provided in my comments is verifiable and reliable, and should amply justify a reconsideration of withdrawing aldicarb registration for tobacco.

Sincerely,

Charles S. Johnson