



US Environmental Protection Agency Office of Pesticide Programs

Letter from Universities Regarding the Strobilurin, Pyraclostrobin (Headline), Supplemental Label

February 13, 2009

*** This document includes an addendum dated
February 20, 2009**

Mr. John Bazuin
United States Environmental Protection Agency
Office of Prevention, Pesticides and Toxic Substances
Registration Division
Fungicide Branch, Team 22

February 13, 2009

Dear Mr. Bazuin,

We are writing to express our concerns about the supplemental label recently issued for “Plant Health” for the strobilurin, pyraclostrobin (Headline). One concern is that this action will open the floodgates for manufacturers of similar products to follow suit, resulting in many more labels of the same sort. As plant pathologists, agronomists, and IPM managers, we work diligently to encourage responsible stewardship of the land, by promoting integrated pest management, including the use of fungicides when necessary to control disease. We are aware that fungicides can have physiological effects on plants. However, the supplemental label contains broad statements such as “... plant health benefits may include improved host plant tolerance to yield-robbing environmental stresses, such as drought, heat, cold temperatures, and ozone damage”, and “Headline can improve plant utilization of nitrogen and can increase tolerance to bacterial and viral infections. These benefits often translate to healthier plants producing greater yields at harvest, especially under stressful conditions.”. Expanding the label for a fungicide to include such broad-sweeping claims invites increased, widespread use of this product to supposedly ameliorate the effects of a multitude of conditions caused by the weather. Furthermore, while the specific claims such as “better tolerance to hail”, “improved tolerance to frost”, and improved tolerance to other environmental stresses may be supported by some limited number of controlled studies in some crops, the publicly available data at our disposal does not instill confidence in the use of Headline for these purposes. The use of a fungicide for growth regulating properties is a serious blow to IPM principles and almost guarantees earlier selection for resistance in certain pathogen populations to a valuable class of fungicides. According to the Fungicide Resistance Action Committee (FRAC) as of December 2008, there is now documented field resistance to strobilurins in thirty two species of fungi comprising twenty one genera, including *Alternaria* spp., *Botrytis cinerea*, those that cause powdery and downy mildews, anthracnose, and others. There are also non-target effects of fungicides (including strobilurins) to consider such as suppression of beneficial fungi in many cropping systems. Aphid flares have been documented in potatoes treated with fungicides, due to disruption of entomopathogenic fungi that help to keep aphid populations in check. Spider mite outbreaks have resulted from fungicide use to control rust in soybeans, contributing to yield losses.

Additionally, there are specific claims on the label such as improved stalk strength in corn and straw strength in wheat, and improvements in seed quality in soybeans. Stalk strength in corn can be improved when foliar diseases are managed. But there is no evidence that stalk strength will be improved generally, and when disease pressure is low. We have not seen publicly available data that demonstrate many of these effects. In fact, there is a published scientific report (Wrather et al. 2004. Plant Disease 88:721-723) that treatment of soybean with a strobilurin (azoxystrobin in this study) can actually result in lower quality seed compared to untreated plants). Data supporting claims of enhanced seed quality in soybean when Headline has been applied have not been properly substantiated. In addition, there are numerous published research reports where application of Headline to soybean prior to the onset of drought conditions DID NOT result in improved yields. Likewise, the large majority of publically available university-managed tests conducted under stressful conditions show no statistically significant improvement in yield in the absence of significant levels of foliar disease.

We understand that the EPA (except for specific classes of products such as antimicrobials) does not routinely require manufacturers to submit efficacy data for their products. However, “the label is the law”. Growers are unlikely to realize that efficacy data were not submitted for this supplemental label, and may view the label as endorsement and approval of the claims made on the label. This will very likely result in the use of Headline for protection against a host of crop stresses in fields where disease pressure is very low or non-existent. The environmental and biological impact of these uses in the absence of a disease threat may be considerable. This is especially worrisome when one considers that corn, soybean and wheat are grown on 220 million acres in the United States and that fungicides are now routinely applied on 25-30% of those acres. We sincerely hope that the EPA will consider a secondary review of this label, as the claims for this product far exceed those made for similar products.

Sincerely,

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ADDENDUM

To Mr. John Bazuin
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February 20, 2009

Additional signatures for the letter sent February 13, 2009 regarding the “plant health” supplemental label for pyraclostrobin. We wish to add our support for the letter addressing concerns about the “plant health” supplemental label.

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