Background

Balance herbicide, manufactured by Rhone-Poulenc Ag Company, was conditionally registered by the US Environmental Protection Agency (EPA) with geographical restrictions in September, 1998. The registration will remain in effect until November 1, 2001. EPA issued the time limited registration based on the agency’s conclusion that the use of the product on field corn met the legal standard of “a reasonable certainty of no harm”. However, EPA imposed use restrictions on the product due to concerns over potential ecological impacts that may result from use.

Balance contains the active ingredient isoxaflutole which is mobile (can easily move from the application site to other areas) in the environment, but breaks down rapidly. However, the primary breakdown product (RPA-202248) is also mobile and breaks down more slowly. RPA-202248 is also toxic (“phytotoxic”) to plants at levels below concentrations that most laboratories can measure (down to parts per trillion). Given this high level of phytotoxicity and mobility, EPA is particularly concerned about the risks posed to groundwater and surface water, and the potential impacts to off-target plants and crops. For these reasons EPA is requiring Rhone-Poulenc to conduct several field studies to characterize risks of leaching to groundwater, run-off to surface waters, and damage to non-target plants. EPA will take appropriate action if these studies indicate that use of isoxaflutole poses an unreasonable risk to human health or the environment. In addition, Rhone-Poulenc is providing analyses of up to 5000 water samples from states, per year.

Prior to approving the conditional registration, EPA contacted the Wisconsin Department of Agriculture, Trade and Consumer Protection (WDATCP), and agriculture departments in other Midwestern and significant corn production states to discuss the pending registration and the concerns identified above. EPA indicated the lack of available data to determine if use of isoxaflutole could result in potential damage to off-target plants, particularly irrigated vegetables. EPA asked states to indicate if they wished to be added to the Balance label as states in which Balance could be used during the conditional use period (1999-2001). Irrigated vegetable production is significant in Wisconsin, Minnesota and Michigan. Based on the potential damage to the vegetable industry and the lack of data available from Rhone-Poulenc, WDATCP Secretary Ben Brancel requested that EPA not register Balance for use in Wisconsin until the needed studies had been completed and data was available indicating that there was no significant risk to Wisconsin’s vegetable industry. Similar requests were made by Minnesota and Michigan. EPA subsequently conditionally registered Balance in 17 states, which did not include Wisconsin, Minnesota or Michigan.

1998-1999 Activities Related to Balance

Rhone-Poulenc has begun groundwater studies at three field sites in response to EPA’s requirements. These sites are located in northwest Iowa (Fall ’98), central Nebraska (Fall ’98) and northwest Indiana (Fall ’99). It is expected that preliminary groundwater monitoring data from the first two sites will be submitted to EPA in late 1999.

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In late 1998, Rhone-Poulenc requested EPA to issue an experimental use permit (EUP) to allow application of Balance to 500 acres of corn in Wisconsin as well as variable acreage in 14 other states during 1999. Objectives of the EUP as stated by Rhone-Poulenc were to 1) obtain performance data under a wide range of environmental conditions, and 2) to assess product strengths and weaknesses prior to commercialization. EPA requested WDATCP input on the proposed EUP. WDATCP specified several conditions on any EUP to be granted for Wisconsin including groundwater monitoring at each EUP site. Rhone-Poulenc subsequently decided against pursuing the EUP in Wisconsin due to associated costs.

Limited experimental use of Balance was carried out during 1999 at University of Wisconsin test plots and sites in other states. The sites were monitored for drift to non-target areas and crops. No significant drift was documented at the Wisconsin sites.

The WDATCP has learned that use of Balance has resulted in crop damage to significant acreage in other states and that label changes are being proposed by Rhone-Poulenc for the product. The WDATCP will continue to follow this situation.

Surface water and groundwater samples in other states have been analyzed by Rhone-Poulenc for isoxaflutole, RPA-202248 and a second, less phytotoxic degradate. The WDATCP has not seen specific data but understands that all three compounds were commonly found in surface water samples.

**The Future of Balance in Wisconsin**

It is unlikely that Balance will be registered in Wisconsin prior to expiration of the conditional registration in November, 2001 and review of all monitoring and study data by EPA. The WDATCP will also attempt to obtain and review this information prior to making a registration decision.

The WDATCP has requested that Rhone-Poulenc conduct limited use of Balance under a Wisconsin EUP beginning in 2000 and continuing in 2001. A single monitoring well would be installed at each of 5-10 EUP sites and sampled on a quarterly basis for isoxaflutole and RPA-202248. This is similar to the monitoring being conducted for acetochlor. This data, coupled with data available from other states and Rhone-Poulenc would allow a more science-based decision by the department as to whether Balance should be registered in Wisconsin.

The department recognizes that Balance may provide another valuable herbicide tool for Wisconsin corn growers in the future. However, the real potential for crop damage as experienced by users in other states, and the potential for damage to vegetable crops if water resources used for irrigation become contaminated with the compound or it’s degradate, precludes allowing use of Balance in Wisconsin at the present time.