

The Great Salmon Debate: A Dow AgroSciences Perspective

A Dow AgroSciences Perspective on Chlorpyrifos' Effects on Salmon

The National Marine Fisheries Service (NMFS) issued a report in November of 2008 alleging that the ability of Pacific Northwest salmon and steelhead to swim, find food and reproduce had been impaired – supposedly jeopardizing their survival – by water-borne exposures to chlorpyrifos, malathion, and diazinon.

Issued in compliance with settlement terms of an activist sponsored Endangered Species Act (ESA) lawsuit, the Biological Opinion (BiOp) ignored significant changes in product use and labeling that have been mandated by the Environmental Protection Agency (EPA) in the reregistration of the products as well as the substantial reductions in use of these products that have occurred in recent years. The BiOp also disregards higher quality, published EPA assessments in favor of the output of an unpublished, unvalidated model that has not been subject to peer review and on results of that modeling derived from use of out-dated and erroneous information.

During a 90-day public comment period which preceded finalization of the BiOp, comments criticizing NMFS' approach and lack of reliance on the best available information were provided by various stakeholders including U.S. EPA, the California Department of Pesticide Regulation (DPR), CropLife America, and Dow AgroSciences. Dow AgroSciences, along with the other affected registrants Cheminova, and Makhteshim Agan of North America, provided substantial additional information and met with NMFS in an attempt to seek correction of errors and improvement of the scientific approach. Much of the information brought to NMFS' attention following release of the draft was ignored, dismissed, or selectively misinterpreted to fit with NMFS' original conclusions.

The NMFS BiOp includes requirements and recommendations to EPA that would significantly change the conditions of use for chlorpyrifos, diazinon, and malathion in ways that could severely limit the ability of farmers to use these valuable tools in affected agricultural areas of California, Idaho, Oregon, and Washington. NMFS is requiring EPA to implement a program to prevent harm to salmon resulting from use of these three pesticides and monitor the effectiveness of such actions. Specific recommendations which NMFS has asked EPA to impose within one year include:

- No-treatment buffer zones of 500 foot for ground applications and 1000 foot for aerial applications to reduce the potential for contamination of surface waters via spray drift.
- Development of 20 foot vegetated filter strips at the down-slope edge of treated fields to reduce the potential for pesticide runoff to surface waters.
- Prohibition of applications when soil moisture is at field capacity or a storm is likely to occur within the next couple of days based on the weather forecast.
- Implementation of an intensive pesticide residue monitoring program of surface waters in California, Idaho, Oregon, and Washington.

In a departure from most existing programs for surface water protection, NMFS is recommending implementation of such measures not only around natural rivers, streams, and marine bays that salmon may inhabit but also near any waters that may eventually drain into salmon-bearing areas including intermittent creeks, drainage channels, and ditches.

The U.S. EPA is in fundamental disagreement with the NMFS position that authorized uses of chlorpyrifos, diazinon, and malathion endanger salmon but must decide how to handle the NMFS recommendations. Although the Agency views the NMFS recommendations as overly conservative, taking no action within one-year timeframe leaves the EPA as well as manufacturers and users susceptible to further lawsuits under "illegal take" provisions of the ESA.

At this time, the EPA is considering development and implementation over the next 6 months, of restrictions on the use of the products which are based on best available information, much of which was ignored in the NMFS BiOp. More complicated scientific and procedural issues raised by the consultation (e.g., how to assess pesticide mixtures, what level of protection salmon food requires for a healthy

population, how cooperation between the EPA and NMFS can be managed, etc.) will likely be deferred to some type of external scientific review panel for resolution on a longer-term basis.

Three Companies File Suit Against the U.S. National Marine Fisheries Service Over Proposed Restrictions on Agricultural Products

In April 2009, Dow AgroSciences, Cheminova and Makhteshim Agan jointly filed suit against NMFS calling for the BiOp-related restrictions to be put aside because they have no legal or scientific foundation and would result in no actual benefit to the environment. The companies have asked the court to expedite the suit so that a decision can be reached before November 18, which is the date on which EPA has been required by NMFS to have implemented the new restrictions.

Seeking to have set aside ill-considered restrictions that have no legal or scientific foundation or actual benefit to the environment, Cheminova, Inc.; Dow AgroSciences LLC; and Makhteshim Agan of North America, Inc., have jointly filed suit against the U.S. National Marine Fisheries Service (NMFS) over a "biological opinion" (BiOp) issued by the Agency last November. The BiOp would require further restrictions on authorized uses of the insecticides chlorpyrifos, diazinon and malathion near habitats of certain endangered west coast salmon and steelhead populations.

Why the NMFS Biological Opinion is Objectionable

The NMFS Biological Opinion ignores detailed scientific assessment of these three compounds undertaken over several decades by the Environmental Protection Agency.

Rather than making use of the extensive risk assessments and data compiled by state and federal regulators on these compounds, NMFS would require new restrictions based on its own flawed modeling without validation or peer review.

A highly precautionary approach to the protection of salmon is already in place under existing science-based regulations. These protections will not be reliably increased by arbitrary and unfounded measures based on flawed modeling without regard to actual product use and existing monitoring data. NMFS failed even to consider significant additional restrictions imposed (or soon to be imposed) by U.S. regulators in the normal process of regulatory review.

Part of the reason for the many flaws in the NMFS assessment is that it was prepared to meet deadlines imposed by activist-driven litigation which limited the time available for a science-based evaluation.

If Allowed to Stand, NMFS' Assessment Would Set Dangerous Precedents

NMFS is under court order to complete assessments of 34 more agricultural products for the protection of salmonids in the next few years. This initial assessment is expected to set a precedent for the evaluations that follow. Unless problems with this assessment are rectified now, evaluations of other products are likely to be similarly flawed.

The NMFS Assessment Has Been Strongly Criticized by Other Regulators

The NMFS assessment has been strongly criticized in initial review by the U.S. Environmental Protection Agency and the California Department of Pesticide Regulation as lacking a solid scientific basis for concluding that authorized uses of these three products actually pose a risk to the continued existence of the salmon species in question. (NMFS largely ignored these comments in issuing its final BiOp.)

The NMFS assessment was similarly criticized by the Washington State Department of Agriculture for over-reliance on the use of hypothetical worst case product use scenarios without sufficient regard to the extensive, readily-available water monitoring data that has already been conducted for these three products.

Why a Legitimate Science-Based Assessment of Pesticides Is Essential

Pesticides are a necessity of modern food and fiber production. Arbitrarily restricting access to these important tools without valid data-driven scientific assessments offers no clear benefit to the environment and no assurance of protection for salmon and steelhead. Such restrictions can, however, lead to reduced food supply and quality and increased food cost. They can also significantly impair the ability of American farmers to compete with growers overseas and cause tremendous financial risk and damage to their livelihood and the sustainability of their operations.

In addition, some pesticides serve a critical role in protecting public health, by controlling important disease vectors such as mosquitoes, which can carry West Nile virus and other disease. By arbitrarily and unnecessarily restricting the use of these vital tools, ill-founded restrictions such as those proposed by NMFS threaten to undermine the ability of municipalities and others to control these common disease vectors and protect public health.

Details on the Suit Filed by These Three Companies

The suit was filed on Wednesday, April 1, 2009, in the United States District Court for the District of Maryland, Greenbelt Division.

The suit asks the court to set aside the NMFS biological opinion and its restrictions on chlorpyrifos, diazinon and malathion as arbitrary and capricious and not in accordance with the Agency's statutory requirements.

Products manufactured by the three companies are as follows:

- Chlorpyrifos is sold by Cheminova, Dow AgroSciences, and Makhteshim Agan.
- Diazinon is sold by Makhteshim Agan.
- Malathion is sold by Cheminova.

The companies are asking the court to expedite the suit so that a decision can be reached before November 18 of this year, which is the date on which EPA is required by NMFS to have implemented the additional restrictions proposed under the BiOp.