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Pesticides

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ABSTRACT OF SYMPOSIUM

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Risk/Benefit Analysis of RPAR Pesticides: Improving the Economic Input

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Economic analyses are an important input to regulatory decisions on problem pesticides under the Federal Pesticide Law (FIFRA). Economics has been a significant and increasing input to major decisions during the 1970's. Some pesticides are being maintained due to substantial economic benefits of continued use even though there is at least some level of human health or environmental risk. For example, EPA has recently recommended continued usage of a pesticide on a food use, even though the chemical is a carcinogen based on animal test data due to the substantial benefits to agricultural users of the pesticide and to consumers. (Benefits were judged to outweigh the risks which is the decision making criterion under FIFRA for determining registrations of pesticides.) Risk/benefit analyses are conducted rather than true cost/benefit analyses where all impacts would be reduced to common units, such as dollars. Data bases and analytical resources are insufficient to permit full utilization of the concept of cost/benefit analysis.

Economic impact analyses focusing on the benefits of the use of pesticides are conducted by multidisciplinary interagency teams consisting of personnel of EPA, USDA, and the state experiment stations. Analyses involve evaluation of economic impacts at the levels of pesticide users, intermediate industry, and ultimate consumers as well as macroeconomic level (also social and community impacts in the event of significant economic dislocations). Partial budgeting and mathematical programming have been the primary analytical methods in the past. Expanded use is being made of programming and econometric models, taking account of biological parameters regarding such factors as pest infestation and damage. Efforts are also underway to do detailed assessments of the costs and benefits of pest control on a detailed "commodity basis" without reference to specific regulatory actions that may be taken by EPA. Such longer term studies provide comprehensive benefit/cost data which greatly expedite economic impact analyses for pesticide regulatory matters and also improve their analytic rigor. There was a discussion of utilizing the concept of net producer/consumer surplus as an analytical method for conducting analyses including adjustment of net benefits for distributional and external impacts. It has merit but is subject to considerable data limitations. A discussion was also presented of risk/benefit tradeoff matrices now being utilized in pesticide decision-making at EPA. The recommendation was made to improve interphase of economists with the biological sciences by such vehicles as multidisciplinary symposia at national meetings of professional societies.

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