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"IN THIS ISSUE "

DPR Approves 22 New Chemicals; 9 are Reduced-risk

The California Department of Pesticide Regulation registered 22 new pesticide active ingredients in 2001, including nine formally designated as reduced-risk chemicals.

Reduced-risk chemicals typically feature less toxicity, allow lower application rates, or possess other desirable qualities compared to traditional pesticides. The new, reduced-risk registrations include four biopesticides derived from natural materials or the synthetic equivalent of natural compounds.

To expedite registration of reduced-risk products, DPR evaluates them concurrently with reviews by the U.S. Environmental Protection Agency. (Pesticides approved by U.S. EPA must also meet stringent California standards.) DPR staffers also help U.S. EPA evaluate health data to expedite registration of new products.

Currently, California has about 890 registered pesticide active ingredients, used in approximately 11,592 pesticide products.

A list of new active ingredients may be found online at www.cdpr.ca.gov/docs/pressrls/2001ais.pdf or call 916/445-3974 for a fax copy. (The list includes eight active ingredients registered in 2000 that were not previously listed.)

REF: California Department of Pesticide Regulation News, March 1, 2002 (02-06).

Keep Pesticides Away From Children, DPR Urges

The California Department of Pesticide Regulation (DPR) issued a reminder to parents and others to keep pesticides out of children's reach, and store pesticides only in their original containers, as required by law. DPR's advisory coincides with the release of the Department's latest annual summary of pesticide injuries, which included several non-fatal incidents involving children.

"While we do not see a large number of children injured by pesticides, no child should be endangered by the careless or illegal use of a pesticide," said DPR Director Paul E. Helliker. "Pesticide injuries to children can be prevented," said Helliker. "Parents and others should use common sense when applying pesticides, and learn more about pest prevention techniques that reduce the need for pesticides in homes, schools, and yards where children play."

DPR's summary of pesticide illnesses for 2000 included the following reports:

- - A two-year-old girl in Mendocino County swallowed chlorpyrifos that her grandmother had diluted in a drinking bottle. Another two-year-old girl in Stanislaus County tasted a sanitizer her father brought home from work. Both children were treated and released.

- - A four-year-old boy in Alameda County drank from a water bottle in which a neighbor diluted a combination of chemicals including an organophosphate insecticide, a fungicide, and a miticide. The child became seriously ill and was hospitalized, but he recovered.

- - A two-year-old boy in Los Angeles became critically ill from drinking diazinon concentrate from a juice container left unattended on a table in his home. He was hospitalized for four days and initially required a ventilator, but recovered with treatment.

National health surveys have shown that almost half of households with children under age five have at least one pesticide stored within a child's reach, often in a bathroom or kitchen. DPR offers these key safety tips:

- - Keep pesticides out of children's sight and reach.

- - Never transfer pesticides into containers that children may associate with food and drink.

- - Use integrated pest management --IPM -- to avoid the use of toxic materials when possible.

For more information on least-toxic pest management and child safety, find DPR consumer fact sheets online at

<www.cdpr.ca.gov/docs/factshts/factmenu.htm>.

In 2000, DPR suspected or confirmed pesticides as a factor in at least 35 cases that involved children aged ten or younger. None was fatal. Overall, DPR suspected or confirmed a total of 893 pesticide injury cases in 2000, compared to 1,201 cases in 1999. Of the 893 cases in 2000, 417 (47 percent) involved agricultural pesticide applications and 476 (53 percent) cases involved non-agricultural uses.

DPR's Pesticide Illness Surveillance Program monitors pesticide injuries to evaluate the general effectiveness of pesticide regulatory efforts, help set enforcement priorities, and improve safety measures. The program is designed to track pesticide injury trends, rather than collect comprehensive statistics, since unreported injuries cannot be documented. Most reported injuries involve the workplace. Some 87 percent of the suspected or confirmed pesticide injuries reported to DPR in 2000 involved occupational exposures.

DPR continuously works to improve reporting of pesticide injuries, including incidents such as suicide attempts and injuries to children. California law requires doctors to report every suspected pesticide illness, but medical recording falls short. DPR began an outreach program to improve physician reporting several years ago.

In 1999, DPR began working with the California Poison Control System to improve pesticide injury reporting. Funded by the U.S. Environmental Protection Agency, the effort enlisted the help of poison control phone operators who take calls from the public and emergency medical personnel.

Federal funding was unavailable in 2000, but concerned poison control employees continued to cooperate with DPR. With their assistance, DPR found 154 suspected or confirmed cases of pesticide injury that might otherwise have gone unreported. (In 2001, DPR received nearly $100,000 in federal funding to resume formal cooperation with poison control centers.)

DPR suspected or confirmed five pesticide-related deaths during 2000. All were classified as suicides.

Breakdowns of 2000 pesticide illness data by county may be found with the news release posted online at <www.cdpr.ca.gov/docs/pressrls/presmenu.htm>. For a fax copy of the county statistics, call 916/445-3974.

The 2000 pesticide illness data summary may be found at <www.cdpr.ca.gov/docs/dprdocs/pisp/2000pisp.htm>.

For a Pesticide Illness Surveillance Program brochure, see <www.cdpr.ca.gov/docs/dprdocs/pisp/brochure.pdf>.

REF: California Department of Pesticide Regulation News, March 7, 2002.

Pesticide Mortality in the United States 1979-1998

Pesticide mortality in the US is usually reported on a case-by-case basis. The Vital Statistics of the US and the publications of the American Association of Poison Control Centers publish yearly statistics on pesticide mortality. This review evaluates the incidence of pesticide mortality in regard to intent, geography, sex, race, age and trends from the years 1979-1998. In this fashion it appeared easier to identify likely areas of exposures and to develop steps to reduce mortality. Pesticide mortality has decreased substantially over the last 20 years. Intentional poisonings, primarily suicides, represent the greatest fraction and are decreasing more slowly than accidental poisonings. Mortality is thus following intentional exposure rather than accidental exposure. Intentional exposures may occur away from sites where pesticide is expected.

Some of the results of this study include:

Unintentional deaths generally occurred in the home. About 2% of the fatal exposures were reported on farms.

From 1979 to 1998 pesticides caused a total of 1191 deaths: 364 (30.6%) accidental, 740 (62.1%) suicidal, and 87 (7.3%) undetermined. The total number of deaths/year during this time period ranged from 32 to 103/year. The data showed a consistent decrease with time for the total deaths observed. Males were 71.6% of the victims and females were 28.4% of the cases; whites were 79.2%, blacks 16.2% and other races 4.6% of the victims.

Total deaths can be separated into accidents, suicides, and those of unknown origin. The data shows the greatest incidence to be suicides (intentional) with lesser numbers of accidents and unknown cases. Both accidental and suicidal deaths decreased with time, but suicides had a more uneven and less dramatic decrease.

Of the 364 accidental deaths reported from 1979-1998, the following compound types were reported as the responsible agent: Organophosphates (28%), other/unspecified insecticide (15.7%), other/unspecified (14.6%), herbicide (11.8%), fumigant (8.2%), rodenticide (6.9%), organochlorine (6.9%), fungicide (6.3%), carbamate (1.6%), and mixtures (0%). The percentage of deaths involving organophosphates decreased after a peak in the early 1980's and remained steady throughout most of the study. It should be noted that most of the organochlorine insecticides were banned during the study period. Their unavailability would be expected to reduce related deaths.

Suicides were responsible for at least 740 deaths from 1979-1998. Males were 67% of the victims and females 33%. Whites were 85.4% of the cases, blacks 8.8% and other races 5.8%. The average annual suicide mortality rate for pesticides in the 20 year period was 1.51 cases/10-million population. Overall the trend was downwards for all races during this 20 year period.

Discussion: Pesticide exposure may occur by ingestion, by dermal, buccal, or ocular absorption, or by inhalation. Potential toxic effects on humans depends upon multiple factors. Toxic effects are dependent upon the inherent toxicity of the pesticide, susceptibility of the individual, as well as the dose, the route and the duration of the exposure. The inherent toxicity of a pesticide is due to its physical, chemical and biological properties.

Poisoning was reported as the third leading cause of injury mortality in 1995. Although pesticides made up only a fraction (0.18%) of these deaths, pesticide exposures contribute to an average of 4,200 hospitalizations, 15,000 health care visits, and over 56,000 calls to poison control centers annually.

Accidental pesticide poisoning can be prevented. Most pesticide poisoning in children appears to occur in homes. In homes as well as on farms, proper storage of pesticides in their original container may prevent access to the product.

Intuitively, the greater use of personal protective equipment and proper application equipment should help the decrease in pesticide mortality to continue.

REF: *Veterinary and Human Toxicology*, 44(2), April 2002.

OPP Downgrades Cancer Classification for Lindane

The risk assessments for lindane and additional supporting documents are posted on EPA's Office of Pesticide Programs (OPP) Internet website (http://www.epa.gov/pesticides/lindane.htm) and are available in the Pesticide Docket for public viewing. The Agency plans to discuss the risk assessments, identify risks of concern, and solicit input on risk mitigation strategies (if needed) with stakeholders (growers, extension offices, states, tribes, commodity groups, the general public, and other Federal agencies). This feedback will be used to complete the Reregistration Eligibility Decision (RED) document, which describes the Agency's risk management decisions for lindane. Prior to finalizing the reregistration decision, the Agency will conduct a close-out conference call with interested stakeholders to describe the regulatory decisions that will be presented in the RED.

The Agency reviewed a newly submitted carcinogenicity study in CD-1 mice along with other data. In accordance with the EPA Draft Guidelines for Carcinogen Risk Assessment (July, 1999), lindane is categorized as "Suggestive evidence of carcinogenicity, but not sufficient to assess human carcinogenic potential" based on an increased incidence of benign lung tumors in female mice only. Therefore, quantification of human cancer risk is not required.

DPR Acts to Protect Compost From Herbicide

The California Department of Pesticide Regulation (DPR) will begin cancellation action against 15 herbicide products, citing their potential hazard to compost.

DPR targeted products containing the herbicide clopyralid that are intended for use on residential lawns in California, since green waste from those areas is a common source of compost. DPR will take no action against clopyralid products intended for other areas, including farmland, rangeland, and forests.

Used to control broadleaf weeds, clopyralid is a low-toxicity chemical that poses little hazard to people, animals, and most vegetation. However, research has shown that even low levels of clopyralid in compost can damage some vegetables. Some compost facilities in California recently reported detections of clopyralid.

"In taking this action, DPR reaffirms its support for composting in California," said DPR Director Paul E. Helliker. "Composting helps reduce our waste stream while helping urban gardeners and commercial agriculture. Taking preventive action to eliminate some clopyralid products will protect compost while preserving beneficial uses of this herbicide," said Helliker.

Washington State authorities recently banned some uses of clopyralid after it was linked to compost that damaged tomato plants. No crop damage reports have been confirmed in California. However, DPR holds authority to cancel the registration of any pesticide product when detrimental effects on the environment outweigh benefits.

DPR will send cancellation notices to seven registrants who market 15 clopyralid products. While these products are non-restricted pesticides (no permit required for purchase), they are generally marketed to licensed, professional applicators for commercial use.

The registrants, with affected products in parentheses, are: The Andersons Lawn Fertilizer (Tee Time 18-5-9 With Millennium Ultra Herbicide, United Horticultural Supply Professional Turf Products 22-3-4 With Millennium Ultra, The Andersons Professional Turf Products 16-4-8 With Millennium Ultra Herbicide & PCSCU); Dow AgroSciences LLC (Lontrel Turf and Ornamental, Lawn Fertilizer Plus Confront Weed Control, Turf Fertilizer Contains Confront, Confront); Howard Johnson's Enterprises Inc. (Howard Johnson's Weed & Feed With Millennium Ultra); Lebanon Chemical Corporation (Lebanon Proscape Homogeneous Fertilizer With Confront Herbicide Broadleaf Weed Control); Lesco Inc. (Lesco Momentum Premium Weed & Feed); Monterey Chemical Company (Millennium Ultra Selective Herbicide); Riverdale Chemical Company (Riverdale Millennium Ultra Selective Herbicide, Riverdale Millennium Ultra Weed And Feed, Riverdale Trupower Selective Herbicide, Riverdale XRM-5202 TM Premium Weed And Feed).

All pesticide products used in the United States legally must be registered with the U.S. Environmental Protection Agency, which dictates product label language, including specific uses. California law requires that any pesticide product approved by U.S. EPA also must be registered by DPR before the product can be used in the state.

DPR's cancellation notice affects the sale and use of clopyralid products in California only. Cancellation could take effect within 30 days, barring a registrant appeal. In lieu of cancellation or appeal, a registrant could voluntarily seek product label changes from U.S. EPA that would eliminate uses that concern DPR.

DPR also announced creation of a clopyralid workgroup that includes members of the compost industry, registrants, the California Integrated Waste Management Board, the California Department of Food and Agriculture, and other stakeholders. The workgroup will continue gathering information on clopyralid use patterns, potential pathways of contamination, regulatory options, and other issues.

REF: California Department of Pesticide Regulation News, March 27, 2002 (02-09).

New Data on Low-Tar/Low-Nicotine Cigarettes

A new National Cancer Institute monograph titled: **Risks Associated with Smoking Cigarettes with Low Machine-Measured Yields of Tar and Nicotine** has concluded:

- 1. Changes in cigarette design and manufacturing over the last fifty years have substantially lowered the sales-weighted, machine-measured tar and nicotine yields of cigarettes smoked in the United States.
- 2. Cigarettes with low machine-measured yields by the FTC method are designed to allow compensatory smoking behaviors that enable a smoker to derive a wide range of tar and nicotine yields from the same brand, offsetting much of the theoretical benefit of a reduced-yield cigarette.
- 3. Existing disease risk data do not support making a recommendation that smokers switch cigarette brands. The recommendation that individuals who cannot stop smoking should switch to low yield cigarettes can cause harm if it misleads smokers to postpone serious efforts at cessation.
- 4. Widespread adoption of lower yield cigarettes by smokers in the United States has not prevented the sustained increase in lung cancer among older smokers.
- 5. Epidemiological studies have not consistently found lesser risk of diseases, other than lung cancer, among smokers of reduced yield cigarettes.

To read this entire report, link to: http://www.cancercontrol.cancer.gov/

Revised Analysis Leads to Different Conclusion About Agent Orange Exposure and Childhood Leukemia

Evidence is too weak to establish whether an association exists between exposure to the herbicides used during the Vietnam War and the development of a form of leukemia in veterans' children, says a new report from the Institute of Medicine (IOM) of the National Academies. Based on a review of all available research, as well as corrected data from an Australian study, the committee that wrote the report revised its earlier finding of a possible association.

The prior IOM review founded its conclusion in part on a report from the Australian Institute of Health and Welfare that looked at the incidence of acute myelogenous leukemia (AML) in the children of Australian veterans of the Vietnam War. The Australian study was later found to have contained a miscalculation that led its authors to incorrectly conclude that these children faced a significantly greater risk of AML than children in the general population did. The revised analysis found that the incidence of the illness was within the range that might be expected in the general population. The committee also considered new evidence from German and Norwegian studies of AML in the offspring of parents who had occupational exposure to pesticides. Neither study found a significant difference in incidence from unexposed populations.

"On the whole, there is insufficient evidence at this time to determine whether a connection exists between AML in children and their parents' military service in Vietnam or Cambodia," said committee chair Irva Hertz-Picciotto, professor of epidemiology, University of California, Davis. "Our review of available studies, combined with the revised analysis from Australia, indicates that the evidence is too weak to draw any conclusions or even make tentative ones."

Leukemia is the most common type of childhood cancer. Acute myelogenous leukemia is a rapidly spreading form that originates in certain bone marrow cells. The disease accounts for about 8 percent of all childhood cancers. Little is known about what causes such diseases in children, the potential environmental risk factors for them, or how parental chemical exposures affect offspring.

The ability of researchers to pinpoint the health risks faced by veterans or their children is hampered by inadequate information about herbicide exposure levels of troops in Vietnam. Most information comes from studies of civilians who were exposed to herbicides on the job or in industrial accidents. It also is difficult to say precisely which troops may have been exposed.

U.S. forces sprayed Agent Orange and other defoliants over parts of south Vietnam and Cambodia beginning in 1962. Most large-scale sprayings were conducted from airplanes and helicopters, but considerable quantities were dispersed from boats and ground vehicles or by soldiers wearing back-mounted equipment. A 1969 scientific report concluded that one of the primary chemicals used in Agent Orange could cause birth defects in laboratory animals. The U.S. military therefore suspended the use of Agent Orange in 1970 and halted all herbicide spraying in Vietnam the following year.

Read the full text of Veterans and Agent Orange: Herbicides/Dioxin Exposure and Acute Myelogenous Leukemia in the Children of Vietnam Veterans on the Web at: http://www.nap.edu/

REF: http://national-academies.org

Research on Emerging Water Quality Issues

The U.S. Geological Survey (USGS) unveiled the first-ever study of pharmaceuticals, hormones and other organic waste water-related chemicals in streams across the nation. And while the findings are significant in their own right, the work points to the need for more research in the future.

Published in the journal Environmental Science & Technology, the study shows that pharmaceuticals, hormones, and other organic wastewater-related chemicals have been detected at very low concentrations in streams across the Nation. Many of the chemicals examined (81 of 95) do not have drinking-water standards or health advisories. Measured concentrations of compounds that do have standards or criteria rarely exceeded any of them.

Limited information is available on the potential health effects to human and aquatic ecosystems from low-level, long-term exposure or exposure to combinations of these chemicals. These new data can guide future research in these areas.

"Little is known about the environmental occurrence of many chemicals we use to maintain and improve the quality of our daily lives," said Dr. Robert Hirsch, USGS Associate Director for Water. "This study begins a process of exploring the occurrence of these chemicals in our nation's streams. The new techniques for measuring these chemicals

will be very helpful for the many scientists who study contaminant movement, impacts on ecosystems, and human health effects."

The USGS study found that chemicals used in households, agriculture, and industry can enter the environment through a variety of wastewater sources, according to Dana Kolpin, a USGS research hydrologist and head of this national study. Those compounds include human and veterinary drugs (including antibiotics), natural and synthetic hormones, detergents, plasticizers, insecticides and fire retardants.

The most frequently detected compounds included: coprostanol (fecal steroid), cholesterol (plant and animal steroid), N-N-diethyltoluamide (insect repellent), caffeine (stimulant), triclosan (antimicrobial disinfectant), tri (2-chloroethyl) phosphate (fire retardant), and 4-nonylphenol (detergent metabolite).

"Overall, steroids, non-prescription drugs and a chemical found in insect repellents were the chemical groups most frequently detected," Kolpin said. "Detergent metabolites, steroids and plasticizers were generally measured at higher concentrations than the other chemical groups, but concentrations measured in this study generally were very low (less than 1 part-per-billion)."

In addition, this study found that wastewater chemicals often mixed in the streams sampled. In half the streams sampled, seven or more compounds were detected and in one stream, 38 chemicals were present in a single water sample.

As part of this study, new laboratory methods were developed in five USGS research laboratories, providing the ability to measure the concentrations of 95 wastewater-related chemicals in water samples. During 1999 and 2000, a network of 139 streams in 30 states were sampled and analyzed for the presence of these chemicals. The streams drain watersheds of varied climate, geology, land use, and size. Most sites were located downstream of areas of intense urbanization and livestock activity, where wastewater is known or suspected to enter the streams.

Because this study is the first to explore the occurrence of these chemicals in the United States, the sites were selected based on where the chemicals are most likely to occur. Thus, this reconnaissance study sets the stage for future studies that can answer questions such as: how far downstream from their sources do these chemicals remain present in the stream, how do the concentrations of these chemicals vary as a function of factors such as climate, land use, flow rates, or waste characteristics or treatment methods.

The paper "Pharmaceuticals, hormones, and other organic wastewater contaminants in U.S. streams, 1999-2000: A national reconnaissance" can be found in the March 15 issue of Environmental Science & Technology, or on the web at: http://toxics.usgs.gov/regional/emc.html.

The water-quality data from this study will be available in a companion report "Water-quality data for pharmaceuticals, hormones, and other organic wastewater contaminants in U.S. streams, 1999-2000", USGS Open-File Report 02-94 on the internet at http://toxics.usgs.gov/.

For more information link to: http://toxics.usgs.gov/regional/emc_surfacewater.html

REF: U.S. Department of the Interior, U.S. Geological Survey News Release March 13, 2002

Toxicology Tidbits

Consumer Page Gives Helpful Information on PPA

FDA has received numerous requests recently for information about phenylpropanolamine (PPA), an ingredient once used in many over-the-counter and prescription cold and cough medicines. PPA was linked in 2000 to a low risk of hemorrhagic stroke, and many manufacturers have voluntarily reformulated their products to eliminate PPA. To help answer any questions, FDA's Center for Drug Evaluation and Research has created an information page. http://www.fda.gov/cder/drug/infopage/ppa/default.htm

REF: FDA News Digest -- March 11, 2002.

USDA Pesticide Data Program Summary for 2000

The U.S. Department of Agriculture's Agricultural Marketing Service announced that the Pesticide Data Program Annual Summary, Calendar Year 2000 and data are available via the Internet at http://www.ams.usda.gov/science/pdp/download.htm.

The Pesticide Data Program (PDP) provides statistically reliable data on pesticide residues detected in selected foods. These data are extremely valuable to consumers, food processors, pesticide producers and American farmers. In addition, these data benefit crop protection for American agriculture. The PDP 2000 data were also used by the Environmental Protection Agency (EPA) in developing the December 2001 Preliminary Assessment of the Cumulative Risks of Organophosphorus Pesticides.

In 2000, the PDP analyzed a total of 10,907 samples. These samples were collected as close to the point of consumption as possible. Foods analyzed in 2000 included 15 fresh fruits and vegetables, three processed fruits and vegetables, peanut butter, poultry and rice--food items that are highly consumed by children. These foods were monitored for insecticide, herbicide, fungicide and growth regulator residues. PDP also conducted a special survey on single servings of peaches.

Overall, approximately 42% of all samples contained no detectable residues, 22% contained 1 residue, and 35% contained more than 1 residue.

REF: AMS Release No. 018-02, Jan. 31, 2002

EDITORIAL NOTE: STAY TUNED! In the next issue of the *Environmental Toxicology Newsletter*, we will include our analysis of these data with regard to pesticide residues in foods.

America's Emerging Microbial Food Safety Issues

Despite significant success at improving the safety of the nation's food supply, current science on which safety is based does not sufficiently protect us from emerging issues inherent to a complex food supply. The evolving characteristics of food, technology, pathogens and consumers make it unlikely the marketplace will be entirely free of dangerous organisms at all times for all consumers. This is among the conclusions presented in the new expert report published by the not-for-profit scientific society Institute of Food Technologists. The report, Emerging Microbiological Food Safety Issues: Implications for Control in the 21st Century was released today at IFT's International Food Safety and Quality Conference and Expo in Atlanta. The report and its support documents are accessible at www.ift.org/govtrelations/microfs/. The expert report Emerging Microbiological Food Safety Issues follows IFT's Biotechnology and Foods expert report published September, 2000, accessible online at www.ift.org/govtrelations/biotech.

REF: IFT News In Brief, February 20, 2002.

Adios Azinphos-Methyl, Farewell Phosmet

Written by Dr. Allan S. Felsot, Environmental Toxicologist, WSU

Within a year after the August 1996 passage of the Food Quality Protection Act (FQPA), the backslapping giddiness accompanying this legislative compromise between agricultural interests and environmental advocacy groups dissipated to consternation that perhaps all was not as it seemed. Agricultural groups pointedly accused the EPA of dismissing “sound science.” They believed EPA was showing an increasing propensity to curtail uses of OPs. Meanwhile, environmental advocates accused the EPA of lacking sufficient science about OPs. They suspected the agency was not faithfully and fully implementing the provisions of the FQPA.

Five years after the FQPA's coming-out party, the scorecard reveals that OP insecticides increasingly are becoming relics of the past. But ironically, the specific mandates of the FQPA to protect consumers, especially infants and children, may turn out to be the least of the reasons for the flight of the OPs. While the illusion of excessive dietary exposure whipped up astonishing antagonism, the issues that may prevent practical use of OPs are turning out to be worker exposure and ecological concerns. The latest casualties illustrating this point are the orchard favorites azinphos-methyl (formulated as Guthion) and its cousin phosmet (formulated as Imidan).

For the entire article, link to http://aenews.wsu.edu/

REF: *Agrichemical and Environmental News*, #191, March 2002.

USDA News Release on NAS Report

Biotechnology poses innumerable benefits for producers, consumers, and the environment worldwide. Under a regulatory framework administered by USDA, the Food and Drug Administration, and the Environmental Protection Agency, the Federal Government is working to ensure the safety of products developed through biotechnology.

The U.S. Department of Agriculture received the National Academy of Sciences (NAS) report Environmental Effects of Transgenic Plants. The report, which was commissioned in January 2000 by USDA's Animal and Plant Health Inspection Service (APHIS), reviews the scope and adequacy of the APHIS component of the Federal regulatory framework for biotechnology. As requested, the report evaluates the evolution of APHIS' regulatory program, assesses the effectiveness of changes that APHIS has made to improve the program over the years, and makes recommendations for further refinements. USDA welcomes the input from NAS.

The NAS report notes that new transgenic plants receive greater regulatory scrutiny than conventional plants. The NAS recommendations were provided "as a means to help improve an already functioning system." The report notes the constant evolution of the regulatory review processes and recognizes that USDA has improved oversight of this new and evolving technology since it was initiated. Additionally, the report reaffirms that plants produced through modern biotechnology pose no different risk than plants produced through more traditional methods.

It is important to note that USDA has already addressed some specific issues raised in the report, which involve three processes: notification, permitting and petitioning for non-regulated status. The report affirmed the conceptual basis of APHIS's streamlined notification process for field trials. APHIS is currently working to incorporate independent scientific input into the notification process. A wider base of scientific knowledge will allow APHIS to ensure that field testing of transgenic plants does not lead to unwanted environmental effects.

APHIS is currently assessing options for monitoring already commercialized transgenic plant products. The agency

can already bring the organisms back under regulation if a plant pest risk is discovered. However, the agency is considering whether it may be appropriate in some instances for research agencies to gather additional environmental information through non-regulatory means. APHIS will thoroughly review the report and study its recommendations. We believe that this study will be an important tool in the future regulation of biotechnology.

REF: USDA Press Release, www.usda.gov, February 22, 2002

Toxicologists Label GM Foods Safe

A study group appointed by the 5,200-member Society of Toxicology, based in Reston, Va., recently issued a draft position paper affirming the safety of foods made from genetically modified (GM) crops. If approved by the society's full membership and council, the report should make biotech enthusiasts happy: It supports key principles governing federal regulatory policy and nixes pet arguments made by the technology's critics.

The draft report was posted on a 'members only' page of the society's Web site (www.toxicology.org). Not surprisingly, it circulated more generally by E-mail and made its way onto the Internet.

The story says that the toxicology study comes on the heels of a report issued by the UK Royal Society in February calling for better safety assessment of genetically modified foods (www.royalsoc.ac.uk).

Scientists and industry advocates who support GM crops insist the plants should be judged on the basis of their content whether they are 'substantially equivalent' to cousins bred via traditional practices rather than on the molecular tricks that birth them. The new report forcefully supports that stand. "The safety of current biotechnology-derived foods compared to their conventional counterparts can be assessed with reasonable certainty using established and accepted methods of analytical, nutritional, and toxicological research," the study concludes. Based on available tests, there's no reason to suspect that transgenic plants differ in any substantive way from traditional varieties.

By affirming the substantial equivalence standard, the report indirectly questions the better-safe-than-sorry 'precautionary principle,' long advocated by biotech critics as a strategy to ban the super crops. It also sides with a view dear to the hearts of agricultural technology champions: New crops should be judged on a case-by-case basis.

The draft report is subject to change by Society of Toxicology members. Comments will be forwarded to the working group, which will then get any revision back to the council for final approval, probably in early May.

REF: *The Scientist,* 16[8]:22, Apr. 15, 2002.

New National Poison Control Hotline

A new national toll-free hotline number to reach a poison control center from anywhere in the United States has been established, at 1-800-222-1222. In commemoration of National Poison Prevention Week, Mar. 17-23, EPA is making available several resources to educate the public about ways to prevent children from being poisoned by pesticides and household products. First authorized by Congress and signed into law by President Kennedy in 1961, National Poison Prevention Week is an annual event intended for local communities to raise awareness of dangers of unintentional poisonings and to promote prevention measures. EPA has supported this effort for several years, and has several resources available to parents and community organizations to help inform people about potential dangers found in homes.

Link to the EPA's website: www.epa.gov

VETERINARY NOTES.....

FDA Finds Pentobarbital in Dog Food Not Harmful

Scientists from the Food and Drug Administration Center for Veterinary Medicine found that exposure to low levels of sodium pentobarbital that could be contained in some dog food is "unlikely to cause any adverse health effects" to dogs.

The group conducted the risk assessment after veterinarians reported pentobarbital, an anesthetic used for animal euthanasia, seemed to be losing effectiveness in dogs. CVM officials theorized that dog food could contain pentobarbital if it were derived from rendered animal products, and that consuming the barbituate in food made dogs less responsive when it was used as a drug.

"If animals are euthanized with pentobarbital and subsequently rendered, pentobarbital could be present in the

rendered feed ingredients," according to the report, which determined that the food did not contain material derived from dogs or cats. "Presently, it is assumed that the pentobarbital residues are entering pet foods from euthanized, rendered cattle or even horses."

The risk assessment determined 50 micrograms was the highest dose of pentobarbital at which no effects of treatment were found, and that dogs at worst consume no more than 4 micrograms per kilogram body weight per day through consumption of dry dog food.

REF: *Veterinary Practice News,* March 27, 2002

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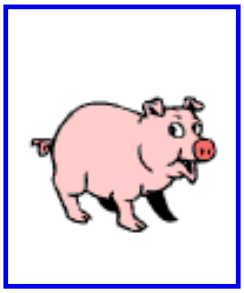

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