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NEW PERSPECTIVES ON PESTICIDES:

CONFERENCE REPORT

Prepared by:

Texas Center for Policy Studies

And

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New Perspectives on Pesticides: Conference Report

Houston, Texas September 11, 1999

The Texas Pesticide Information Network, in conjunction with a new organization, Texans for Alternatives to Pesticides, sponsored a statewide conference on pesticide issues in Houston on Saturday, September 11, 1999. The conference was preceded on Friday evening by the *Organic Products Fair* at the Houston Arboretum and Nature Center. The Product Fair was attended by over 250 people. Exhibitors included 25 vendors of organic home and garden products, organic food and other organic resources, as well as non-governmental organizations offering information on alternatives to pesticides. Howard Garrett, author of Texas Organic Gardening and radio show host of "The Natural Way" on WBAP in Dallas, gave a very well-received presentation on organic alternatives to home, garden and agricultural pesticides.

The *New Perspectives on Pesticides* conference was held at Rice University on Saturday. It was attended by almost 100 people, including concerned citizens, health and agricultural researchers, and federal, state and local government agency representatives. The conference agenda (see page 4) included speakers from Consumers Union and organizations in California and New York that have implemented successful pesticide use reduction strategies. The workshops at the conference also included a variety of speakers from non-governmental and governmental organizations in Texas.

Four broad themes emerged from the conference:

- First, there ***are many viable alternatives*** that can be implemented to reduce or eliminate pesticide use—in the home, in the garden, in public areas managed by local governments or other entities, in schools and in agriculture.

- Second, ***insufficient information and education about alternatives*** is one of the primary obstacles to implementation and greater use of alternatives to pesticides.

- Third, we ***do not have sufficient information on pesticide use*** in some areas—such as protecting drinking water quality or fish and wildlife from pesticide contamination—to implement effective responses.

- And, fourth, in some areas there is ***insufficient funding*** for collection of data or research into alternatives to pesticides.

Summaries of the keynote speech and workshops that follow illustrate these themes. While it is not possible to catch the full flavor and extent of each discussion here, the workshops did produce summaries of issues and possible solutions. Many of the conference participants discussed ways in which these solutions can be pursued over the next couple of years in Texas. These solutions as well as further information on the

various workshop topics are included under a *Selected Resources* section for each workshop.

We welcome input from those who could not attend the conference, but who are interested in alternatives to pesticides, reducing pesticide use and getting better information on the pesticide use that occurs in Texas. The broad themes and specific solutions that emerged from the conference are incorporated in this Conference Report and, in part, will help guide future reports and activities of the Texas Pesticide Information Network and Texans for Alternatives to Pesticides. Suggestions can be forwarded to Mary Kelly, Texas Center for Policy Studies (512-474-0811 or tcps@econet.org); Reggie James, Consumers Union (512-477-4431 or jamere@consumer.org) or Victoria Albright, Texans for Alternatives to Pesticides (713-523-2TAP or victoriaalbright@hotmail.com).

Keynote Speech, Dr. Michael Hansen, Consumers Union

Dr. Hansen discussed a variety of local, national and international pesticide issues. He began by emphasizing that integrated pest management involves not just minimizing pesticide use or using less toxic pesticides, but at its core is dependent on a thorough understanding of the natural biology and ecology of pests and working with nature to solve problems.

He discussed the 1996 Federal Food Quality Protection Act (FQPA), which was designed to address the need for health-based tolerances for pesticides on food. Dr. Hansen emphasized that there is still much we do not know about the potential adverse effects of pesticides, especially with respect to endocrine disruption. He also stressed that the FQPA was designed to be more protective of public health by: (1) focusing on risks to more vulnerable populations (including infants and children), (2) considering cumulative effects of being exposed to pesticides through food, air, water and other routes and (3) considering the effects of being exposed to multiple pesticides that have the same chemical mechanism for producing potential adverse effects.

Nevertheless, there are still many questions concerning whether EPA is properly implementing the FQPA (Discussed below under ***Pesticides and Food*** workshop).

Dr. Hansen also emphasized that there is a great need to focus on urban and suburban use of pesticides, which can be 5 to 10 times higher than in agriculture on a per acre basis with some more direct exposure routes. An example of this focus is an effort in Westchester County, New York, involving local residents and others in a committee to reduce use of pesticides by county government. Dr. Hansen said that local officials were responsive to the need to reduce pesticide use and were really looking for good information on alternatives. The Westchester effort is focusing initially on pesticide use reduction for golf courses and public buildings. (Discussed below under the ***Local Government*** workshop)

Moving from domestic examples, Dr. Hansen discussed several international pesticide issues as well. Some of the most toxic pesticides are being widely used in developing

countries, though there are growing in-country movements and efforts at the international level to counter these trends. Some of these efforts are meeting stiff resistance from pesticide manufacturers. Dr. Hansen referred specifically to efforts of Malaysian groups to publicize a new scientific study on the potential adverse effects of one of the most widely used herbicides, glyphosate. Glyphosate is considered to be less toxic than many other herbicides from an acute effects standpoint. A new study by Swiss epidemiologists examining the cumulative effects, however, pointed toward possible links between glyphosate and certain rare leukemias.

According to Dr. Hansen, when Malaysian advocates tried to publicize this study, representatives of Monsanto, one of the manufacturers of glyphosate, threatened journalists with legal action, claiming the Swedish study had not shown a statistically-significant link. Apparently, however, additional research results from the Swedish study, with a greater sample size, do demonstrate a statistically-significant link.

Despite these kinds of skirmishes, some progress has been made toward reducing overall pesticide use in developing countries. For example, the Integrated Pest Management Facility at the international Food and Agriculture Organization (FAO) has been extremely successful in reducing pesticide use on rice crops in Asia, achieving a 70-80% reduction and saving Indonesian rice farmers over $ 1 billion. This program is now expanding to other countries and other crops. In addition, the World Bank has revised its policies to require minimization and, where possible, elimination of pesticide use in bank-funded projects. Proper implementation of these policies is still an issue, however.

Dr. Hansen then identified high-priority issues for the future, which include reducing urban and suburban use of pesticides and the potential problems with genetically-engineered plants. As one example of the potential problems with genetically-engineered plants, Dr. Hansen cited the case of cotton, corn and other crops implanted with an activated Bt gene. With such crops being planted on a widespread basis, organic farmers, who rely on limited applications of Bt to control certain pest problems, are concerned that pests will develop a resistance to Bt, reducing its effectiveness. Some organic farmers have sued EPA over the decision to authorize widespread use of Bt cotton and corn.

In concluding, Dr. Hansen noted that efforts to reduce and eliminate pesticide use often seem to face an overwhelming tide of resistance from pesticide manufacturers. But he urged participants to take a longer view and look at the substantial gains that have occurred over the last 15 years, with some of the worst pesticides being banned, new emphasis on integrated pest management and the increasing availability of alternatives to pesticides.

Selected Resources:

Consumers Union website: www.consumersunion.org
Pest Management at the Crossroad (examination of IPM implementation): www.pmac.net
Information on implementation of the FQPA: www.ecologic.ipm.org
Also, see links section of TXPIN website, www.texascenter.org/txpin

Conference Agenda

Saturday, September 11th, Rice Student Center, Rice University

8:30 to 9:00 a.m. Welcome and Purposes of Conference: Mary Kelly, Texas Center for Policy Studies and Victoria Albright, Texans for Alternatives to Pesticides

9:00 to 9:45 a.m. **Keynote: New Perspectives on Pesticides**: Dr. Michael Hansen, Consumer Policy Institute, Consumers Union (Introduction by Reggie James, Director, Southwest Regional Office of Consumers Union)

10:00 a.m. to noon Concurrent Workshops on Issues and Solutions—*These workshops were designed to provide an overview of the issues and then involve the participants in a discussion of solutions to the problems identified. Reports from each workshop are incorporated in this report.*

Pesticide Use in Schools: Parents' Bill of Rights Presenters included Kim Phillips, Environment Committee Chair, Texas Parent-Teacher Association; Reggie James, Consumers Union; and Sandy Schubert, Los Angeles Safe Schools Coalition. Moderator: Victoria Albright

Options for Reducing Local Governments' Use of Pesticides Presenters included Gregg Small, Pesticide Watch, San Francisco, CA and Laura Haight, New York Public Interest Research Group. Moderator: Rochella Cooper, TAP

Protecting Drinking Water Sources from Pesticide Contamination: Presenters included Sparky Anderson, Texas Clean Water Action and Bruce Moring, U.S. Geological Survey, National Water Quality Assessment Program. Moderator: Mary Kelly, Texas Center for Policy Studies

Responding to Incidents of Pesticide Mis-Use: Presenters included Mary Ann Smith, University of Texas School of Public Health, Murray Walton, Texas Structural Pest Control Board and Rachel Rosales, Texas Department of Health. Moderator: Rick Lowerre, Henry, Lowerre, Johnson & Frederick.

1:15 to 3:15 p.m. Concurrent Workshops on Issues and Solutions, continued

The Effects of Pesticides on Fish and Wildlife Resources: Presenters included Brandt Mannchen, Forestry Subcommittee Chair, Houston Sierra Club; and Dr. Susan Kegley, Californians for Pesticide Reform. Moderator and presenter: Sparky Anderson, Texas Clean Water Action.

Pesticides and Food: Presenters included Beth Hayden, National Organics Program, U.S. Department of Agriculture; Michael Hansen Consumers Union; Dr. Lovell Jones, M.D. Anderson Cancer Center and Nelly Rocha, U.S. EPA Region VI. Moderator: Reggie James, Consumers Union

Reducing Pesticide Use In Agriculture: Presenters included LaRhea Pepper, Texas Organic Cotton Producers; Joe Bradford, USDA, Harlingen, Texas; Peggy Sechrist, Sechrist Ranch and Homestead Healthy Foods and Bob Randall, Director, Urban Harvest. Moderator: Rick Lowerre, Henry, Lowerre, Johnson & Frederick.

Reducing Pesticide Use in the Home and Garden: Presenters included Howard Garrett, organic gardening expert; Mark Bowen, Living Art Landscapes; and Sue Pitman, Health and Environment Solutions, Inc. Moderator: John Ferguson, Nature's Way.

3:30 to 5:00 p.m. **Closing Session: Summaries from Workshops**; Future Activities on Texas Pesticide Issues; Feedback on Conference

Selected Resources:

The complete conference agenda as well as speaker biographies are available on TXPIN website at http://www.texascenter.org/txpin/conf.htm

Pesticides in Schools

Issues: Presenters in this workshop included Reggie James, Consumers Union, Sandy Schubert, Los Angeles Safe Schools Coalition and Kim Phillips, Texas Parent Teacher Association, Environmental Committee Chair. Issues discussed during the *Pesticides in Schools* workshop included:

(1) *Implementation of laws and policies*: Even when good laws are on the books requiring reduced pesticide use in school, implementation of those laws can require significant resources, oversight and citizen involvement. The same is true for implementation of pesticide use reduction policies within a particular school or school district. Other issues relating to implementation include oversight issues associated with outside pest management firms and interpretation of Structural Pest Control Board rules and regulations.
(2) *Cost*: How do concerned citizens obtain accurate facts and figures for the costs of implementing IPM and alternatives to pesticides in schools? A related issue is schools loading IPM cost effectiveness assessments with the cost of functions like sanitation, basic maintenance etc. that should be done anyway. This practice makes it more difficult for IPM compete on a cost basis with chemical approaches.
(3) *Responses that may raise other environmental issues*: One example raised was whether sealing a building to keep bugs out might make the air quality inside a building less healthy by reducing fresh air circulation.
(4) *Rights*: There was discussion about the right of children, teachers and school workers to be free from pesticide exposure and the rights of parents to protect their children from such exposures.
(5) *Education and training*: There was substantial discussion of the need for better training of parents, staff and teachers regarding the dangers of pesticides and alternatives to pesticides.

Solutions: Some of the solutions discussed during this workshop were:

(1) *Assess schools' implementation of Texas IPM law:* An over-arching suggestion is that parents and concerned citizens demand accountability with respect to school pest management practices and pesticide use. Using the methodology developed by Consumers Union for the Schools Report Card (see *Resources* below), conduct assessments of the pesticide use practices of other Texas school districts to better understand how the Texas law is, or is not, being implemented. Also, the Structural Pest Control Board has model contracts for schools that use outside pest management contractors.
(2) *Take a unified approach to "healthy schools:"* An example of this is EPA's Indoor Air Quality Kit, which has been used by the Texas PTA to help educate teachers, staff and parents about keeping indoor school air healthy (including taking steps to eliminate or reduce pesticide use indoors).
(3) *Emphasize the rights of teachers and workers to a healthy workplace:* In combination with the Parent's Bill of Rights, these strategies could increase stakeholder interest in reducing or eliminating pesticide use in schools.

(4) *Educate parents, teachers, school staff and students:* Provide these groups with both information on their rights and alternatives to pesticides.

Selected Resources:

Texas PIN/Consumers Union Southwest Regional Office, *Pesticide Report Card: Texas Schools Score from A to F in the Integrated Pest Management Program* and *Pesticides in Schools: A Texas Parents' Bill of Rights*, both available on www.texascenter.org/txpin in PDF format or from Consumers Union, Bala Wong, wongba@consumer.org, 512-477-4431.

EPA, *Pest Control in the School Environment: Adopting Integrated Pest Management*, EPA Office of Pesticide Programs, available by calling 1-800-490-9198 or order online at http://www.epa.gov.ncepihom/orderpub.htm

EPA, *"Tools for Schools" Kit*, Document Number 402-K-95-001. Available at http://www.epa.gov/iaq/tools4sc.html Orders may also be placed at the IAQ INFO Clearinghouse, 1-800-438-4318.

National Coalition Against the Misuse of Pesticides website: http://www.csn.net/ncamp or call 202-543-5450 (Non-profit organization promoting reduced pesticide exposure through alternative pest management strategies).

EPA, *The EPA Children's Environmental Health Yearbook*, Ch. 5, Health Effects of Pesticides, 1998. Available from the EPA website at http://www.epa.gov/children.

Texas Parent-Teacher Association website: http://www.txpta.org/ In particular see 1998 Texas PTA Green Almanac website: http://www.txpta.org/programs/grnalm/grnalm.htm

Texas Structural Pest Control Board, Austin, Texas—1-512-451-7200
(enforcement of Texas School IPM law);

Texas Department of Health--1-800-588-1248
(reporting health effects from exposure to pesticides).

Local Government

Issues: After hearing presentations on successful efforts in New York (Laura Haight, New York Public Interest Research Group) and California (Gregg Small, Pesticide Watch) to reduce and eliminate pesticide use by local governments, the Local Government workshop produced a list of ways in which this could be accomplished in Texas. Issues included herbicide use by local governments and alternative to herbicides; how to work with local governments to structure ordinances or policies to reduce pesticide use; and educating the public about local government use and alternatives. The discussions in this workshop also included options to encourage reduction of other urban and suburban uses of pesticides.

Solutions: Some of the solutions discussed during this workshop were:

(1) *Educate*: Local government personnel, county extension agents, and the public need better information about alternatives to pesticides.
(2) *Make School Districts implement IPM policy*. Also work with Universities to reduce their pesticide use. One suggestion is to encourage the agricultural extension service to do more to promote alternatives to pesticides.
(3) *Encourage local governments* to post signs before spraying municipal properties. Also work with local government to sponsor public education forums, brochures, signs, TV and radio programs, etc. on alternatives to pesticides. Similarly, encourage local governments to set up demonstration areas for using alternatives to pesticides and help them publicize efforts.
(4) *Enact local pesticide "sunset" ordinances* to phase out use of pesticides on municipal property. Also, support pesticide use reporting at the state level.
(5) *Educate suppliers* (e.g. nurseries, retail and wholesale) on the availability of alternatives to pesticides. Also encourage homeowners to use yard signs to recognize use of pesticide alternatives (e.g. "My Yard is Pesticide Free").
(6) *Publicize Texans for Alternatives to Pesticides*, including establishing a TAP website. TAP could support community gardening programs and educate neighborhoods about alternatives to pesticides.
(7) *Form alliances with media personalities*. Use call-in radio shows to help educate public about alternatives to pesticides.
(8) *Use* the Texas Agricultural Resources Protection Authority (ARPA) to advocate programs for development of non-chemical alternatives to pesticides.

Selected Resources:

Northwest Coalition for Alternatives to Pesticides (NCAP) website: http://www.pesticide.org/default.htm

California Department of Pesticide Regulation website: http://www.cdpr.ca.gov

Californians for Alternatives to Toxics, *The Poisoning of Public Thoroughfares: How Herbicides Blight California's Roads*, Arcata, CA: CATs, 1999. Available at http://www.reninet.com/catz

Californians for Pesticide Reform (CPR) website: http://www.igc.org/cpr/

Californians for Alternatives to Toxics (CATS) website: http://www.reninet.com/catz

New York Coalition for Alternatives to Pesticides (NYCAP) website: http://crisny.org/not-for-profit/nycap/nycap.htm

Environmental Advocates (New York) website: http://www.envadvocates.org/public_html/issues.html

Pest Management at the Crossroads website: http://www.pmac.net

Pesticide Action Network of North America (PANNA) website: http://www.panna.org

Our Stolen Future website: http://www.osf-facts.org/ (Describes potential health effects of pesticide exposure)

Pesticides and Drinking Water

Issues: This session was initiated by presentations from Bruce Moring, U.S. Geological Survey National Water Quality Assessment Program (USGS NAWQA) and Sparky Anderson, Texas Clean Water Action. Dr. Moring discussed pesticide sampling results from the Trinity River NAWQA studies and Mr. Anderson discussed federal water quality and drinking water programs being implemented by the Texas Natural Resource Conservation Commission. Mary Kelly, Texas Center for Policy Studies, added a short discussion of the relationship between pesticide use reporting and protecting drinking water sources from contamination.

(1) *Lack of sufficient information on pesticides and water quality in Texas:* While the U.S.G.S. NAQWA studies are producing very valuable data on pesticides and water quality in Texas, they are currently limited to the Trinity and the South Central Texas area, along with a "single-shot" reservoir and groundwater supply sampling program. The TNRCC in 1996-97 had only two statewide fixed monitoring sites that sampled regularly for pesticides in water.
(2) *Availability of the Consumer Confidence Report (CCR) to Renters:* The CCR, which will be distributed to those who pay a water bill in October 1999, will generally not be sent to those people who rent an apartment and don't pay a water bill directly. Nothing in the current law requires either the apartment manager or the water supply provider to provide the CCR to the renter.
(3) *Focus on certain pesticides:* Certain pesticides, in particular atrazine, are being detected with some frequency in finished tap water provided by Texas water systems. Many farmers use this weed killer, and it is currently used in "weed and feed" products that are still found on home gardening store shelves.
(4) *Public involvement:* There was discussion of the need for strong public involvement in the state's efforts to implement the Total Maximum Daily Load (TMDL) portion of the federal Clean Water Act and the Source Water Assessment and Protection (SWAP) program of the federal Safe Drinking Water Act.
(5) *Testing for citizens:* There was discussion of options for citizens who want to have their water tested for pesticides and the need for a fully quality-assured/quality-controlled lab service that is affordable/free for citizens.

Solutions: Possible solutions to these problems discussed during the workshop include:

(1) *Getting more information in Texas:* One solution is to expand the USGS program in Texas. TNRCC's water quality program suffers from chronic under-funding. One potential source of revenue for water quality monitoring could be a sales tax on pesticides used for agricultural purposes—these pesticides and fertilizers are currently exempt from Texas sales tax resulting in an annual revenue loss of approximately $62 million.

(2) Making the Consumer Confidence Report available to renters: One solution—at least for renters who receive water from a water system controlled by a municipality or other elected body—would be to ask the governing elected officials to find ways to make the CCR available to renters.

(3) *Focus on certain pesticides such as atrazine:* There was a suggestion that the most direct way to address the problem would be to ban atrazine use, at least near vulnerable water supplies, as has been done in Wisconsin and other areas. Another solution is to find alternatives to atrazine for the farmers.

(4) Increasing public involvement: Statewide groups need to make sure local constituents are well-informed of opportunities to participate in these programs for water bodies and drinking water supply sources in their areas.

Selected Resources:

Texas Center for Policy Studies and TXPIN, *Pesticides and Texas Water Quality*, January 1999. PDF file available at http://www.texascenter.org/tcps/waterpst.pdf

Texas Center for Policy Studies, *Atrazine Contamination of Texas Drinking Water: Your Right-to-Know*, January 1999. Available at http://www.texascenter.org/tcps/atrazine.htm

USGS, NAWQA studies: Trinity River Basin Study Unit website: http://tx.usgs.gov/trin/pubs In particular see fact sheets related to pesticides.

TNRCC, Total Maximum Daily Load (TMDL) Program website: http://www.tnrcc.state.tx.us/water/quality/tmdl

TNRCC, Source Water Assessment and Protection (SWAP) Program website: http://www.tnrcc.state.tx.us/water/wu/swap/index.html

EPA, TMDL website: http://www.epa.gov/OWOW/tmdl/

EPA, SWAP website: http://www.epa.gov/ogwdw000/swpurynp.html

Responding to Incidents of Pesticide Mis-Use

Issues: Background for this workshop was provided by presentations from Murray Walton, Structural Pest Control Board; Dr. Mary Ann Smith, Univ. of Texas at Houston, School of Public Health; and Rachel Rosales, Texas Department of Health (TDH). Chris Sagstetter from the City of Houston and Dr. Chip Carson from the University of Texas Houston School of Public Health (UTHSPH) also contributed to the background.

According to Mr. Walton, the large majority of complaints received by the SPCB relate to customers dissatisfied with the treatment results; complaints regarding exposure, misuse and property damage are less frequent. (Dr. Carson, however, noted that he was seeing several misuse/exposure complaints.) A new program at TDH is collecting information on human exposures under a grant from EPA related to implementation of

the Food Quality Protection Act. This is in addition to TDH's efforts on workplace exposures to pesticides. TDH is trying to conduct outreach efforts, including outreach to clinics, to let them know of this data gathering and evaluation effort.

In terms of responding to incidents of misuse, the discussion focused on four areas: individual response, organizational response, government response and the role of universities. For individuals, the need to provide public information to individuals on who to call about pesticide misuse incidents was emphasized (see *Selected Resources* below), along with the need for the individual to document the incident through photos, notes and any other means possible.

At the organizational level, the need for education to prevent misuse incidents and for supporting government programs designed to prevent and respond to misuse incidents were emphasized. The issue of "inert" ingredients in pesticides and their possible contribution to problems from pesticide exposure was also noted.

Selected Resources:

(1) Reporting incidents of misuse
Texas Department of Health—1-800-588-1248;
Texas Structural Pest Control Board—1-512-451-2700; www.spcbtx.org
Texas Department of Agriculture—1-800-tellTDA
City of Houston—1-713-640-4372; chriscaudalltexas@usa.net

(2) Other resources
Texas Southern University School of Law environmental justice center—1-713-313-7287
Society of Toxicology (information on pesticides): www.toxicology.org
American Assn. of Occupational and Environmental Clinics website:
http://dmi-www.mc.duke.edu/oem/aoec.htm

Pesticides and Fish and Wildlife

Issues: This workshop was initiated by presentations from Brandt Mannchen on forestry and herbicide issues and Dr. Susan Kegley on her study for Californians for Pesticide Reform on the effects of pesticide use on fish, wildlife and ecological systems. Sparky Anderson also discussed the origins of the recent successful effort to pass a bill relating to aquatic herbicide use in Texas waterways. Key issues identified in this workshop include the following:

(1) *Lack of ecological research on the effects of pesticides on forest and aquatic ecosystems:* there is a lack of comprehensive research on the effects of pesticides on forest and aquatic ecosystems. Such research is necessary to better understand the links between pesticide use and ecosystem changes.
(2) *Pesticide use data:* as shown by Dr. Kegley's study and work by the USGS, the availability of pesticide use data can significantly enhance understanding of the effects of pesticides on fish, wildlife and ecosystems. Texas does not have pesticide

use reporting, though HB 3079, if properly implemented, will require reporting of use for aquatic herbicides. This is important since aquatic herbicide use results in direct addition of herbicides to fisheries and drinking water supplies.

(3) *Funding:* research into and monitoring of the effects of pesticides on fish and wildlife often suffers from lack of adequate funding.

(4) *Educating User Groups:* anglers in Texas have recognized the need to educate boaters and others on the need to avoid spreading hydrilla or other "exotic" aquatic vegetation from one lake to another.

Solutions: Some solutions to the problems identified in the workshop include:

(1) *Support further academic research:* Non-governmental organizations should support governmental and university programs to conduct such research and help investigators resist pressures to avoid or bury such research.

(2) *Support specific programs designed to generate funding*: One option in Texas is to remove the sales tax exemption for agriculture pesticides and fertilizers and the new exemption for herbicides used in forestry. Removing the agricultural pesticide/ fertilizer exemption would generate about $ 62 million per year, a portion of which could be devoted to such research and better monitoring, as well as helping to promote alternatives to pesticides. (see *Selected Resources)*. Texas angler groups would also like to see Texas Parks and Wildlife put out a conservation license plate with a bass, to help raise funds for implementation of the aquatic herbicide bill and protection of fishing habitat and educating lake management entities on alternatives to aquatic herbicides, among other things. They also believe that the sales tax on motor boat repair labor should be dedicated to these types of purposes.

Selected Resources:

Texas Pesticide Information Network, *Preserving Texas Fishing: Better Data Needed About Pesticide Use (1999)*, available at www.texascenter.org/txpin or from the Texas Center for Policy Studies.

Dr. Susan Kegley, *Disrupting the Balance: Ecological Impacts of Pesticides in California*, San Francisco: Californians for Pesticide Reform, 1999. Available at http://www.igc.org/cpr

Friends of the Earth, Fair Agricultural Chemical Taxes (F.A.C.T.): Tax Reform for Sustainable Agriculture, Washington, DC: Friends of the Earth, 1999. Available at http://www.for.org

Sensible Management of Aquatic Resources Team (SMART) website: http://www.s-m-a-r-t.org

Sierra Club, Houston Chapter website: http://sierra.bayou.org In particular see information on Sam Houston National Forest

Pesticides and Food/Food Safety

Issues: Presenters for this workshop were Beth Hayden, USDA National Organic Standards Program; Dr. Lovell Jones, University of Texas M.D. Anderson Cancer Center; Michael Hansen, Consumers Union and Nelly Rocha, U.S. Environmental Protection Agency, Region VI. There was detailed discussion of many issues in this workshop, but a few of the key issues and solutions identified included:

(1) *Risk Assessment:* There are fundamental flaws in the risk assessment process used to set tolerances for pesticides in foods, many related to lack of complete knowledge about the potential adverse health effects of pesticides.
(2) *Food Quality Protection Act (FQPA) Implementation:* Many participants felt that the implementation of the FQPA was not on track and that EPA was not adhering to the law's mandates; and
(3) *Organic Standards Program:* After the public outcry in response to the initial national organic standards rule, the program appears to be back on track; the changes being made in the rule in response to public comment demonstrate that sufficient expression of public interest can influence major public policy decisions with respect to pesticides and food.

Solutions:

(1) *Local production:* Public policy, government and non-governmental organizations need to encourage the local production of food to supply local needs (i.e. farmers markets; buying local produce; etc.);
(2) *Public education:* There need to be stronger efforts to educate the public about the implications of major food safety policy decisions, including implementation of the FQPA;
(3) *Organizing:* Stronger efforts are needed to organize public pressure in support of full implementation of the FQPA; and
(4) *Research funding:* More public money needs to be available for research supporting organic food production techniques and more public interest research (vs. research supporting pesticide manufacturer or agribusiness interests).

Selected Resources:

EPA, Food Quality Protection Act (FQPA) website: http://www.epa.gov/oppfead1/fqpa For general purposes also see http://www.epa.gov/pesticide/food

USDA, National Organic Program website: http://www.ams.usda.gov/nop

National Organic Consumers Association website: http://www.organicconsumers.org

Environmental Working Group's website about residue in food: http://www.foodnews.org

University of Missouri, Missouri Alternatives Center (MAC) website lists organic publications at http://agebb.missouri.edu/mac/links/maco.htm

Reducing Pesticides in Agriculture

Issues: Three presentations provided very important information for this workshop. LaRhea Pepper discussed organic cotton production and marketing in Texas; Peggy Sechrist spoke about production of organic beef and chicken and Bob Randall discussed Urban Harvest's community gardens program and related and educating the public about pesticides and the benefits of food production without pesticides. Key issues and solutions identified in this workshop include the following:

(1) *Demonstrating viable market demand for organic products:* One of the most important elements in promoting organic production of food and fiber is demonstrating consumer support for such products, which will improve the economic viability of organic production methods. Demonstrating the viability of the organic market is what will ultimately encourage more producers to move away from pesticide use and toward organic production.
(2) *Voting with your dollar:* Consumer support for organic products can also influence agricultural policy and help encourage more producers to convert to organic production.
(3) *Education is key:* Educating consumers about the benefits of organic products for them, for the environment and for workers and about the availability of organic products is key to sustaining the viability of organic producers and expanding organic production.
(4) *Better infrastructure:* Organic producers believe there is a need for better information to be available to current and potential organic producers on alternatives to using pesticides in food and fiber production, as well as information on market entry and business stability to help organic producers gain a reasonable foothold.
(5) *Marketing assistance:* Better marketing assistance for organic producers is essential.

Selected Resources:(also see Pesticides and Food resources, above)

Charles Hall, *Guide to Marketing Organic Produce*, Texas A & M. Available at http://aggie-horticulture.tamu.edu/sustainable/publications/organicproduce/organic.html

Charles Francis, Director, Center for Sustainable Agricultural Systems, University of Nebraska-Lincoln, website: http://www.ianr.unl.edu/ianr/csas In particular, see Pesticide Education Resources at http://ianrwww.unl.eud/ianr/pat/ephome.htm

Leopold Center for Sustainable Agriculture, Iowa State University, website: http://www.ag.iastate.edu/centers/leopold/Leopold.html

Reducing Pesticides in the Home and Garden

Issues: This workshop was initiated with presentations from Howard Garrett, Sue Pitman and Mark Bowen. The presentations and the discussion that followed identified the following issues and solutions.

(1) *Certification of alternatives to pesticides*: There are some problems with the Texas Structural Pest Control Board not recognizing alternatives to pesticides, especially in the context of schools. The SPCB needs to certify alternatives to pesticides use to provide a better framework for use of these alternatives. Until this happens, people may be forced to claim that the alternatives are being used for something other than a pest control purpose (e.g. soil amendment).
(2) *Promote alternatives through the Press and Media*: Actions need to be taken to encourage more coverage of alternatives to pesticides. Possibilities include: awards for environmentally-friendly projects; encouraging media to provide a better range of information on non-pesticide alternatives in gardening columns or garden shows.
(3) *Use "theme" gardens to promote organic approach*: One way to attract attention to the viability of organic gardening is through theme gardens (e.g. butterfly garden, herb garden, etc.) that are grown and managed without pesticides.
(4) *Widespread availability of home and garden pesticides*: Toxic pesticides are widely available to consumers and their sale in places such as grocery stores is problematic. Consumers could urge grocery stores not to sell pesticides that can volatilize and possibly settle on produce being sold in the same store.
(5) *Education*: Talking to friends, neighbors, politicians etc. is still one of the best ways to educate people about alternatives to pesticides.

Selected Resources:

Howard Garrett, "The Dirt Doctor's" website: http://www.dirtdoctor.com

Homegrown Newsletter website: http://homegrowntexas.com
(Bi-monthly Texas newsletter for organic gardening)

TAP has compiled a great recipe card file for organic alternatives to pesticides. Contact TAP at 3015 Richmond, Suite 220, Houston, TX 77098. Or call 1-713-523-2827.