

FROM THE GROUND UP

a publication of *STUDENT ACTION WITH FARMWORKERS*

VOLUME 10, NUMBER 2

Summer 2002

Pesticides: A Danger to Farmworkers and the Environment

Pesticide Statistics

Compiled by Laxmi Haynes, SAF
Expansion Coordinator, 919-660-3660,
famworker_justice@yahoo.com

- Number of pesticides presently on the market that were registered before being tested to determine if they caused cancer, birth defects or wildlife toxicity: **400**
- Amount of time it takes to ban a pesticide in the U.S. using present procedures: **10 years**
- Percentage of the total U.S. population supplied with drinking water from groundwater: **50%**
- Percentage of all U.S. counties containing groundwater susceptible to contamination from agricultural pesticides and fertilizers: **46%**
- Number of people in the U.S. routinely drinking water contaminated with carcinogenic herbicides: **14 million**
- Percentage of municipal water treatment facilities lacking equipment to remove these chemicals from the drinking water: **90%**
- Occupational group that suffers the highest rate of chemical-related illness in the U.S.: **farmworkers**
- Pesticide-related illnesses among farmworkers in the U.S. each year: **approximately 300,000**
- Number of people in the U.S. who die each year from cancer related to pesticides: **10,400**

Source:

Pesticides from the Air: Dangers to Farmworker Families

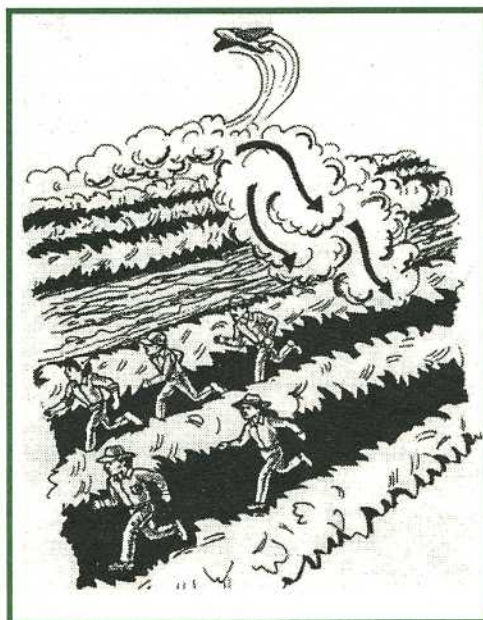
by Fawn Pattison, Executive Director, Agricultural Resources Center
919-967-1886,

Most farmworkers live quite close to the fields where they work, often staying in homes or camps on the farm property where they are working. It has been widely documented that farmworker families are exposed to dangerous pesticides in the home because pesticides can be brought in on work clothes and shoes, and even on skin and hair. Children can also be exposed when they play in or near the fields where parents are working, as well as through contaminated drinking water.

Farmworker families also suffer exposure from pesticide drift. Drift happens when clouds of pesticides sprayed onto the fields move from their intended target onto neighboring homes, crops, roads, businesses, churches, and schools. Toxic pesticides can and do drift right onto the homes and surrounding yards where food is prepared, laundry is hung to dry, and where children play.

One of the most serious causes of pesticide drift is aerial spraying. Many of us have seen the vapor trails as airplanes or helicopters spray farm crops like cotton, wheat, corn or rice with pesticides. Because aerial spraying uses such large quantities of pesticides, and often from a great height, drift is a serious side effect. It has been estimated that less than 0.1% of pesticides ever reach the pest they were intended for.¹ More than 40% of the pesticide sprayed aerially will migrate off-site as drift.²

Here in North Carolina, aerial spraying is used extensively on cotton, tobacco, pine plantations (for paper), and along utility rights-of-way to keep vegetation off power lines in mountainous areas. That means farmworkers and others who live near these crops are at risk every time pesticides are applied. *Continued on page 2*



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*"Run From Drift" image from the EPA
Farmworker Safety Manual*

SAF is a 501(c)(3) non-profit organization whose mission is to bring students and farmworkers together to learn about each other's lives, share resources and skills, improve conditions for farmworkers, and build diverse coalitions working for social change.

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Action Alerts

Send an email with the word "subscribe" to <farmworkers-request@duke.edu> to receive SAF's weekly Action Alerts about legislation affecting farmworkers, organizing campaigns, campus events, and job opportunities.

For more information or to submit articles, contact:

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From the Ground Up Editor:

Laxmi Haynes

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Pesticides from the Air, continued from page 1

For those who live near crops where pesticides are applied aerially, drift is a major concern. Scientific studies on this issue are usually intended to assist with technical and policy recommendations on how best to minimize pesticide drift. While the law has not kept up with this body of data, the results it presents are fairly uniform. Whenever pesticides are applied aerially, they are expected to drift. In certain weather conditions, drift can be greatly exacerbated. Other factors such as equipment and spray height can affect how far pesticides will drift from the application site. Most studies that examine pesticide drift test areas ranging from 50 to 800 meters (164 to 2,625 feet) from the site of application – and some level of pesticide residue is generally found, even at the greatest distance.

A series of studies on how the height of a pesticide application affects drift found that for a release height of one meter (3.3 feet), the peak of the deposition occurs approximately 15 meters downwind – that's 49 feet from the target. The same study found that for a release height of ten meters (33 feet), the peak of the deposition does not occur until 50 meters downwind – that means that the largest amount of pesticide is being dropped 164 feet downwind from the application site under normal conditions.³ Weather conditions such as stability can increase the amount of pesticide drift by as much as 10-fold.⁴ On many farms, one can see farmworkers and other tenants living just a few yards from the crops being sprayed.

The US Environmental Protection Agency, which is charged with the duty of regulating pesticides in the U.S., does not make specific recommendations related to drift from aerial spray. Federal regulations simply state that all efforts should be made to prevent pesticide drift from coming into contact with people, livestock, crops, wildlife, and other sensitive areas. It is up to the states to specify how that should be done.

Each state has its own formula for dealing with drift from aerial spraying. Some states, such as Mississippi, New Hampshire, California, Colorado, Connecticut, and others require pre-notification before aerial spraying begins. Many states, including North Carolina, require buffer zones that keep aerial sprayers at a distance from the neighbors. NC regulations currently require a 300-foot buffer zone around schools, churches, hospitals and businesses. They also require a 100-foot buffer zone around homes. This buffer does not cover the entire property – just the 100 feet surrounding the house. Any amount of pesticide drift is allowed outside that 100-foot boundary. 100 feet hardly seems enough, when (according to the data mentioned above) drift can be expected as far as 2,600 feet from the application site under normal conditions. Unfortunately, North Carolina's regulations are fairly typical of other agricultural states – and they are currently being threatened by a NC Department of Agriculture proposal to eliminate buffer zones altogether.

Most advocates who work with farmworkers are well aware of the dangers that pesticides can pose: labored breathing, headaches, rash, eye and skin irritation, wheezing, faintness, and in extreme cases, even death. These are all symptoms of acute exposure, often the result of one dose that is too high. For farmworker children, the danger usually comes from prolonged exposure to pesticides, also known as chronic exposure. Over time, someone who is exposed regularly to pesticides, even in very small doses, can experience serious health problems. These problems can include fatigue, neurological disorder, depression, increased chemical sensitivity, cough, lymphoma, and some forms of cancer. For children, regular exposure to pesticides can seriously damage cognitive skills and even lead to lower IQ. Pregnant women are especially at risk for birth defects and reproductive disorders.

Continued on page 3

¡La Familia! A Program to Prevent Pesticide Exposure Among NC Farmworker Families

by Alicia Doran, Field Project Coordinator, ITF Intern 1998, adoran@wfubmc.edu

For more information, contact Dr. Thomas Arcury 336-716-4347

Farmworker families are often exposed to pesticides and other environmental pollutants in the places where they work and live. It is difficult for farmworkers to reduce their environmental exposures because they have little control over their work and living situations. Farmworker exposure is therefore an issue of environmental justice as well as an issue of occupational health. The ¡La Familia! Project, a collaborative effort of the North Carolina Farmworkers Project and Wake Forest University School of Medicine, is working to develop a culturally appropriate health education program to help reduce the exposure of farmworker families to pesticides. This five-year research project is supported by a grant from the National Institute of Environmental Health Sciences, and includes farmworker families in western North Carolina and southern Virginia who work in mountain agriculture, including Christmas trees, tobacco, and ornamental plants.

During ¡La Familia!'s first year, we completed in-depth interviews with farmworker mothers to learn about their experiences and beliefs about pesticide exposure to their families. We also collected dust samples from the homes and urine samples from farmworker children and adults to attempt to assess pesticide exposure and absorption levels. We are now in the process of reporting the results of these samples to the study participants. This analysis focuses on three main areas: (1) the household and agricultural pesticides that were found in their homes; (2) the manner in which these pesticides may have entered their homes; and (3) some simple ways that they can reduce their exposure to pesticides in the future. We hope that this knowledge will encourage families to take steps within their homes to reduce their exposure to pesticides in the future.

During the next year, we will use insights from these interviews to develop a culturally sensitive and educationally appropriate Lay Health Advisor program to teach members of the farmworker community about pesticide safety. We hope that by using this method, we will empower women and families to take control of their own health as it relates to pesticide safety issues.

Pesticides from the Air, continued from page 2

A recent study of the children in the Yaqui valley of Sonora, Mexico revealed some of the slow-working symptoms of pesticides in children. The Yaqui valley is an agricultural area with a very homogeneous population. People down in the valley, as well as people in the surrounding foothills, have similar genetic backgrounds and diets. While the valley population uses pesticides on their crops, those in the foothills do not. Therefore children in the foothills are exposed to pesticides in far lower quantities than their neighbors in the valley.

The scientists asked 4 and 5 year-olds to jump up and down as long as possible, catch balls, drop raisins into bottle caps, perform memory drills, and draw pictures of people. Valley children demonstrated significantly less stamina, eye-hand coordination, 30-minute recall, and drawing ability than preschoolers from the foothills communities (see image).⁵ The Yaqui Valley study clearly shows some of the correlations between pesticide exposure and neurological damage in children. Studies of children in the U.S. have found that almost all children, farmworker and non-farmworker, have significant levels of pesticides in their blood.

Pesticide drift from aerial application is a significant source of unnecessary pesticide exposure for farmworker families. The aerial application of pesticides endangers farmworkers not only in the fields, but in homes as well.

SOURCES

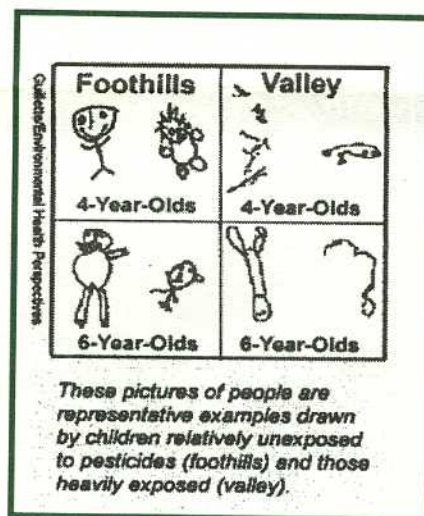
¹ David Pimentel and others. 1991. "Environmental and Economic Impact of Reducing U.S. Agricultural Pesticide Use," *Handbook of Pest Management in Agriculture Vol. I* (Boca Raton, FL: CRC Press, 1991), pgs. 679-718.

² US Congress. Office of Technology Assessment. 1990. *Beneath the bottom line: Agricultural approaches to reduce agrochemical contamination of groundwater*. Washington, DC: US Govt. Printing Office.

³ Ian Craig, Nicholas Woods and Gary Dorr. 1998. "A simple guide to predicting aircraft spray drift." *Crop Protection* vol. 17, no. 6:475-482.

⁴ Sandra L. Bird, David M. Esterly, and Steven G. Perry. 1996. "Off-target deposition of pesticides from agricultural aerial spray applications." *Journal of Environmental Quality* 25:1095-1104.

⁵ Elizabeth A. Guillet, Maria Mercedes Meza, Maria Guadalupe Aquilar, Alma Delia Soto, and Idalia Enequina Garcia. 1998. "An Anthropological Approach to the Evaluation of Preschool Children Exposed to Pesticides in Mexico." *Environmental Health Perspectives* 106:347-353.



Action Alert!

Write the NC Pesticide Board and tell them that aerial sprayers should not have the right to deposit pesticides on other people's homes, schools or businesses.

Write to:
M. Scott Whitford, Chair
NC Pesticide Board
PO Box 27647
Raleigh, NC 27611

Blue Hill Farm: Life of an Organic Farmer

by Wayne Uffelman

I came to farming in a very roundabout way. I grew up on a small barrier island off the Georgia-Florida coast. I played sports, fished, hunted and surfed: A typical all-American boy. My dreams were to grow up and have a family, and work in the field of forestry. It was all peaches and cream.

In 1969, with one year of college behind me I returned home for the summer, to a different world. Friends returning from colleges around the Southeast, and from the war in Vietnam looked at each other and knew we had changed. The hair was long, the mood was angry. Racism, sexism, war, and drugs were all we talked about. By my second year of college, it seemed like society as I had known it was about to fly apart.

One late night a friend said out of the blue, "Lets go to the mountains, I know a friend of a friend whose parents have a cabin way back on Meadow Fork Gap, we can stay for free." The cabin happened to be in one of the remotest areas I have ever seen. The two weeks I stayed in the Spring Creek section of Madison County, I found people who still lived off of the

land growing their own food, on small farms. They worked hard, took care of each other and seemed to live in another time. I loved it!

In 1972, I came back with a down-payment on a beautiful mountain farm complete with an old house, wrap-around porches, barn, tobacco allotment and green fields. I became a true-blue back-to-the-lander. But soon reality struck. How was I going to pay for all this beauty? I started to grow tobacco and with the help of neighbors, I started learning the craft and skills of tobacco farming. Thirty years later I now own Blue Hill Farm, and paid for it with those tobacco checks.

In 1996, I decided to transition my farm to organic practices, and I became certified organic. I always grew our house garden organically, and knew I could farm organically. Today I grow tobacco, potatoes, corn, and mixed vegetables, organically. I sell everything I grow locally to people who really care about what they eat, the tobacco they smoke, the land it is grown on, and the environment in which we all live. It is a world totally different from my world of 1969. Though it is small and just a mere speck in time, I love and value my farm and the experience it has given me.

The 30 something years I have been farming, I have watched agriculture become more and more industrialized, dependent on toxic fixes and high inputs, trying to separate farming from food. I also have watched the same people who taught me farming die off, and their children get public jobs, because you can't make it on a farm today. A couple more generations of this and what will we have? Industrial states run by large multinational corporations where the bottom line dictates worker safety, how food is grown, how workers are treated, and the land cared for. The family farm as I have known it will be thrown with all its experiences in to some corporated beaker, cooked up and inserted into some industrialized clone, and sent to the supermarket of the world. Can we stop this? Do we want to stop it? For Student Action with Farmworkers, the challenges are great.

For more information on organic farming and sustainable agriculture, contact:

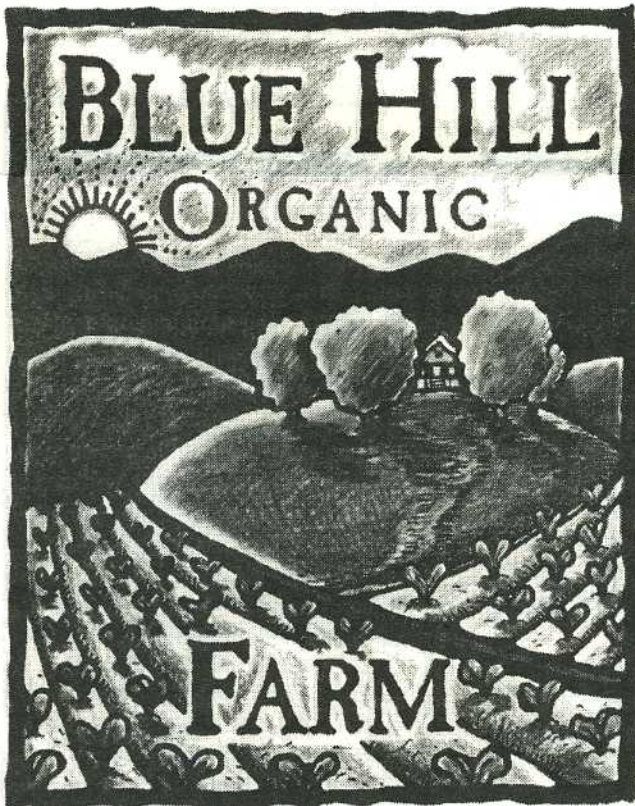
Community Food Security Coalition:
www.foodsecurity.org

University of California Sustainable Agriculture Research and Education: www.sarep.ucdavis.edu

Carolina Farm Stewardship Association:
www.carolinafarmstewards.org

World Sustainable Agriculture Association:
www.igc.org/wsaala/wsa.html

National Campaign for Sustainable Agriculture:
www.sustainableagriculture.net
www.organic-research.com



Marshall, NC

In the summers of 2000 and 2001 Blue Hill Farm welcomed SAF's ITF interns to tour the organic farm as part of their orientation. Thanks for giving students the opportunity to learn about farming techniques that benefit the environment and people.

SAF Into the Fields Alumni Updates

1993 intern Constance Wannamaker worked at Neighborhood Legal Assistance, traveling throughout South Carolina conducting outreach to farmworkers informing them of their legal rights. She helped many workers get off of camps where they were being held in debt peonage and get back home. She is currently an attorney at Texas Rural Legal Aid in El Paso, providing a variety of legal services for farmworkers, spending most of her time in litigation against out-of-state defendants for violations suffered by migrants based in El Paso. 109 N. Oregon, Suite 710, El Paso, TX 79901, 915-544-4421, cwannamaker@trla.org

1994 intern Alejandra Okie-Holt worked at the Wake County Health Department. From 1996-1998 she was SAF's Program Director. Alejandra is currently the Director of Community Education at the Latino Community Credit Union in Durham, NC. She is developing a financial education curriculum that can be used in ESL classes and by community organizations working with the Latino population to teach financial literacy. Alejandra and her husband are expecting a baby in August. alejandraoh@yahoo.com

1995 intern Myah Cook Lamachio worked at the Watauga Medical Center's Maternal & Child Health Department, taking women and children to their doctor's appointments. Myah has been involved with the Latino community non-stop since her internship. For a year and a half she taught ESL classes in a Greensboro Community College and from 2001-2002 she taught middle school children ESOL classes. Myah and her husband are expecting a baby in August. 413 Cedar St., Greensboro, NC 27401, 336-691-1767

1997 intern Ethan Timm worked at the SAF office doing policy and research. He is studying architecture at Columbia University in New York, focusing on sustainable and environmentally conscious design. "My experience at SAF made me acutely aware of agricultural issues including pesticide use and mistreatment of immigrant labor. While the work I do now is not directly related, I think that American lifestyle choices have a lot to do with farmworkers, so I hope I'm still doing my part."

Mariana Ramos: Victim of Pesticide Poisoning

by Mariana Ramos, ITF Intern 2000, mr82780@hotmail.com

On February 25, 1999, I died. It was a simple surgery; I was only going to get my tonsils removed but everything went wrong. I was completely paralyzed, and stopped breathing on my own; for at least seven hours, I was on life support. I soon found out that the cause of these problems was a blood deficiency that, in my case, was caused by pesticides I've been exposed to all my life.

I, like many other migrant children, started working in the fields because my parents and friends didn't have a place for me to stay. In the fields we would have ice-cream buckets and we would just go pick whatever, just be there. We wouldn't do it every day because as a child you can't handle the weather and everything. I think I was about ten when I started really working. My youngest brother was about six when he started working, but at six you can't really work all day. At twelve I started working in cucumber fields in Wisconsin. Then we decided to go to Minnesota and from there we started doing sugar beets and a whole bunch of other crops.

I can't physically work in the fields anymore. It's just impossible. Because of being exposed to pesticides and herbicides, I have developed a blood deficiency that makes me allergic to muscle relaxants. I found that out the hard way and ended up in the Intensive Care Unit. In order to restore my health, I can't be exposed to those kinds of chemicals any longer. My two younger brothers also have this blood deficiency. But my parents and my brother still work with this one rancher, who they've been with for about six or seven years, and continue to be exposed to pesticides. My dad's fifty and my mom's forty-three, and they're still working in the fields.

Pesticide safety is not something that is always practiced. My younger brothers and I paid dearly for not knowing how to protect ourselves from pesticides. The blood deficiency we developed is not an isolated case and there are other ways pesticides can affect an individual. Education is keen in preventing others from falling ill due to pesticide poisoning.

Excerpts from: Interview with Mariana Ramos, June 18, 2001 and Essay by Mariana Ramos, 2000

For more information about pesticides, contact:

Agricultural Resources Center: www.ibiblio.org/arc
Beyond Pesticides: www.beyondpesticides.org
Farmworker Justice Fund: www.fwjjustice.org
National Center for Farmworker Health: www.ncfh.org
Pesticide Action Network: www.panna.org
Pesticide Watch: www.pesticidewatch.org

Upcoming Events

**It's SAF's 10th Anniversary!
Come Celebrate with us!
California State University, Sacramento, CA
November 9, 2002**

Enjoy Food! Live Music! Speakers! and more!
For more information, contact: Laxmi 919-660-3660, farmworker_justice@yahoo.com

**7th Annual SAF
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California State University, Sacramento
November 8-10, 2002**

Join students, farmworkers, faculty and advocates
in building a national coalition for change!

Workshops on labor issues, environmental issues,
health issues, legal issues, student organizing and more!

Registration deadline: October 15, 2002
Download registration forms off SAF's website: www.saf-unite.org

For more information or to register, contact:
Laxmi 919-660-3660, farmworker_justice@yahoo.com

**AIM Leadership Retreat for Migrant Students
Camp New Hope, Chapel Hill, NC
September 20-22, 2002**

For more information, contact: Ramiro Arceo 919-660-3652, rarceo@duke.edu

Announcements

Thank you to our donors:

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Tina Pope
Molly Renda
Todd & Kathleen Shapley-Quinn
And the many individuals who wish
to remain anonymous.

Thank you to the Z. Smith Reynolds
Foundation for matching all alumni
gifts in SAF's 10th year 2002.

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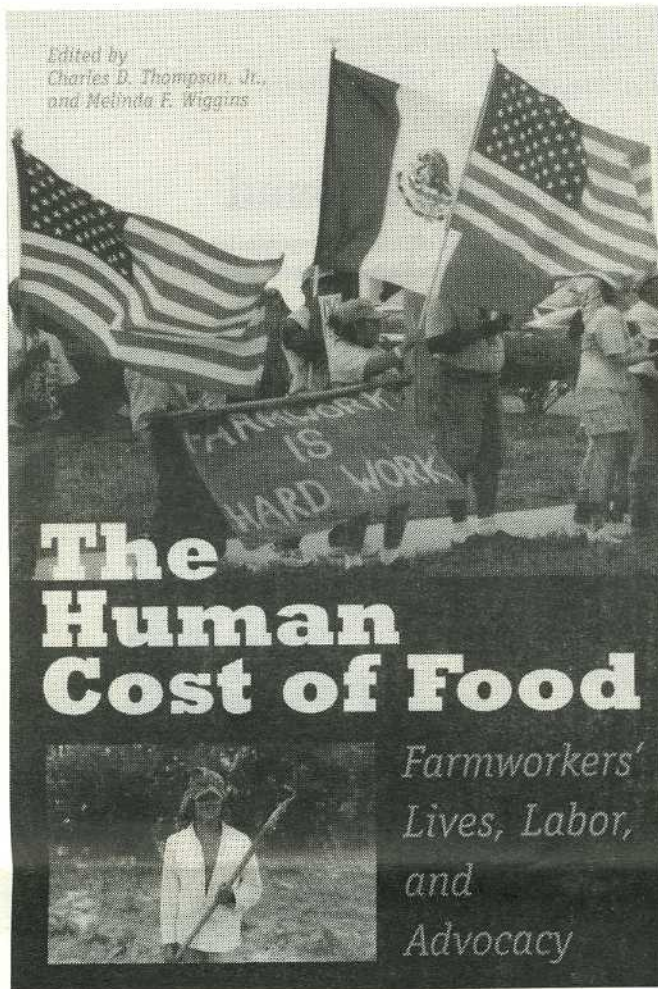
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1317 W. PETTIGREW ST.
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DESCRIPTION:

Finding fresh fruits and vegetables is as easy as going to the grocery store for most Americans--which makes it all too easy to forget that our food is cultivated, harvested, and packaged by farmworkers who labor for less pay, fewer benefits, and under more dangerous conditions than workers in almost any other sector of the U.S. economy.

The contributors to this book are all farmworker advocates--student and community activists and farmworkers themselves. Focusing on workers in the Southeast United States, a previously understudied region, they cover a range of issues, from labor organizing, to the rise of agribusiness, to current health, educational, and legal challenges faced by farmworkers.

The authors blend coverage of each issues with practical suggestions for working with farmworkers and other advocates to achieve justice in our food system both regionally and nationally.

Published by the University of Texas Press, 2002
 6 x 9 in., 337 pages, 23 photos
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Melinda F. Wiggins is Executive Director of Student Action with Farmworkers. SAF is a nonprofit organization that brings students and farmworkers together to learn about each other's lives, share resources and skills, improve conditions for farmworkers and build diverse coalitions working for social change.

Cultured Ground/ Tierra Aculturada:

*A Compilation of Folklife Documentaries
by Student Action with Farmworkers' 2001 Interns*

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Cultured Ground

*A Compilation of Folklife Documentaries
by Student Action with Farmworkers' Interns*



Tierra Aculturada

*Una Recopilación de Vida Folclórica
por Estudiantes Becarios de Acción Estudiantil con Trabajadores Agrícolas*

Description: A bilingual compilation of folklife documentaries by SAF's 2001 summer interns. As part of the Into the Fields Summer Internship and Leadership Development Program, interns documented the traditions of North and South Carolina's farmworkers and Latino immigrants.

Documentary topics range from religion and ritual to artistic traditions, to culinary traditions, including traditional recipes. Read about a Mexican beltmaker, a poet from Mexico, and a dancer from Columbia.

11 x 8.5 in, 53 pages, 19 black and white photos

Compiled by Laxmi Haynes

Printed 2001