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NON-CIRCULATING

# Texas Preventable Disease

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# NEWS

Frank Bryant, Jr. MD, FAAFP  
Chairman  
Texas Board of Health

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Agricultural Pesticide Poisoning  
Monthly Statistical Summary

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## AGRICULTURAL PESTICIDE POISONING

Agricultural workers face many occupational hazards, a major one being pesticide exposure. According to estimates from the Environmental Protection Agency, 2.7 billion pounds of pesticides were applied in the US in 1987. Agriculture accounted for 79% of this pesticide use.<sup>1</sup> A serious and often ignored consequence of such widespread use of pesticides is that thousands of US farmworkers are exposed to these chemicals annually. It is estimated that over 300,000 of these workers experience pesticide-related illness each year.<sup>2</sup> Because pesticide poisoning cases often go undiagnosed or unreported, little data is available to describe the scope and incidence of this problem in Texas.

Due to the nature of their work, farmworkers routinely experience dermal, oral, and respiratory exposure to pesticides. Pesticide residues accumulate on skin, hair, and clothing during direct handling or application of the pesticide or during contact with plants and soils after application.<sup>3</sup> Workers who directly mix and apply pesticides are at greatest risk of exposure, but field workers who hand-harvest the crops and come in direct contact with the pesticide residues are also at risk.

### HEALTH EFFECTS OF PESTICIDES

Workers exposed to pesticides may experience acute and/or chronic health effects. Acute effects can be classified into four categories: 1) irritation of the eye, throat, nose, and respiratory tract; 2) skin rash and burns; 3) systemic poisoning effects such as dizziness, blurred vision, nausea, vomiting, chest pains, or fatigue; and 4) death. Chronic effects of pesticide poisoning may include delayed neurotoxicity and damage to the liver, kidneys, lungs, eyes, and skin. Animal studies indicate that some pesticides may cause birth defects, reproductive effects, and cancer.

Information regarding acute pesticide poisoning and the chronic health problems associated with pesticides can be found in Hayes, *Pesticides*

*Studied in Man.* and in the Environmental Protection Agency publication by Morgan, *Recognition and Management of Pesticide Poisonings*. The EPA booklet is considered an excellent reference for the medical practitioner who treats pesticide poisoning on an emergency basis.

### TEXAS AGRICULTURAL HAZARD COMMUNICATION ACT

In 1987, the Texas legislature passed the Texas Agricultural Hazard Communication Act, commonly referred to as the "Farmworker Right-to-Know Law." The Act is intended to improve the diagnosis and treatment of pesticide-related illness by providing farmworkers, farmers, and health care providers with important information about common pesticides used on Texas crops, the health effects of these pesticides, and ways to minimize pesticide exposure. One of the more critical aspects of the law is that during emergency situations, attending medical personnel may obtain information immediately from agricultural employers about any pesticide covered under the Act.

As mandated by the law, the Texas Department of Agriculture is providing farmworkers with pesticide information in the form of "crop sheets" (See Figure ). These information sheets, written in both Spanish and English, list the pesticides most commonly used on each crop, their chemical classifications, the months of application, the acute and chronic symptoms, basic safety and emergency procedures, important telephone numbers for poison control centers and case reporting, and a summary of agricultural workers' rights under the law. Workers are encouraged to bring crop sheets to clinics, emergency rooms, and physicians' offices when they seek medical care.

The Texas Agricultural Hazard Communication Act is considered a stepping stone for educating farmworkers about pesticides. However, to provide health care to those exposed to pesticides, greater efforts are needed to train physicians, nurses,

and other health care providers to investigate occupational exposure as a cause of illness.

**REPORTING**

Acute occupational pesticide poisoning is a reportable disease under the 1985 Texas Occupational Disease Reporting Act. Physicians and laboratory directors must provide case reports including the patient's name, address, age, sex, race, diagnosis, and date of diagnosis to their local health departments or the TDH Epidemiology Division in Austin.

**RESOURCES**

For treatment and management information, contact the Statewide Poison Control Center: 1-800-392-8548 or the North-Central Texas Poison Control Center: 1-800-441-0040. To report an

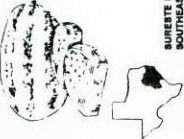
acute occupational pesticide poisoning, contact the TDH Epidemiology Division: 1-800-252-8239. For further information, crop sheets, or local area presentations, contact the Texas Department of Agriculture, Right-to-Know Program, PO Box 12847, Austin, TX 78711; (512)463-7547.

Prepared by: Nancy Simcox, Pesticide Research Specialist, Texas Department of Agriculture, Austin.

**REFERENCES:**

1. US EPA, Office of Pesticide Programs. Pesticide industry sales and usage--1987 market estimate. Washington, DC, November 1988.
2. Sakala C. Migrant and seasonal farmworkers in the US: a review of health hazards, status, and policy. Excerpted in the Migrant Health Clinical Supplement. Migrant Health Newsline, February/March 1988.
3. Brender J, et al. Occupational pesticide poisoning: reportable disease in Texas. Texas Medicine 1988;84:29-35.

**LEA Y GUARDE ESTE INFORME DE COSECHA / READ AND SAVE THIS CROP SHEET**



**SANDIA WATERMELONS**

Estos son los pesticidas usados con más frecuencia en esta cosecha. Uno o más de los siguientes síntomas pueden indicar que ha sido envenenado con un pesticida. / These are the most commonly used pesticides for this crop. One or several of the following symptoms may indicate a pesticide poisoning.

QUIMICA CHEMICAL	Meses de Uso Months of Use	Clase Class	EFECTOS A LA SALUD Y PRECAUCIONES HEALTH EFFECTS AND PRECAUTIONS
Chlorobutol Bravo*	Per 24 Horas For 24 Hours	Benzofenil	Efectos al Largo Plazo / Long Term Effects: Se sospecha que algunos pesticidas causan defectos natales, aborto espontáneo, esterilidad en el hombre y la mujer, irritaciones a la piel, daños al hígado u otros órganos. También se sospecha que algunos pesticidas causan, al largo plazo, tumores o cáncer. / Some pesticides are suspected of causing birth defects, reproductive effects, skin problems, and injury to liver or other organs. Some pesticides are also suspected of causing tumors or cancer over a long period of time.
Catbyl Sevin*	Per 24 Horas For 24 Hours	Carbamato	
Demeton Cygon*	Per 4 Dias For 4 Days	Organofosforo	
Mancozeb Dethane*	Per 24 Horas For 24 Hours	Etilenoimidazolidinocarbamato	
Trihalin Treflan*	Per 24 Horas For 24 Hours	Dinitroimidazolidinocarbamato	
Benfula Prefer, Basasin*	Per 24 Horas For 24 Hours	Benzofenil Sulfonamida	
Diazinon Diazinon*	Per 24 Horas For 24 Hours	Organofosforo	
Carbofention Trimon*	Per 16 Horas For 16 Hours	Organofosforo	

• Productos de uso general  
• Commonly used product

Otros pesticidas usados son: Ethyl Parathion, Paraquat, Ethon, Prothiofosfon, Endosulfan, Imidacloprid, Neodanil.

**NO USE, NO USE, NO USE PESTICIDES IN THE HOME! DO NOT USE PESTICIDES CONTAINERS FOR HOME USE!**

**WASH YOUR HANDS WELL WITH SOAP AND WATER**

Wash before eating, drinking, smoking, using gum or tobacco, or going to the bathroom.

Mantenga su rostro por-nacer en buena salud! Consulte con su médico sobre los peligros de ser embarazada con pesticidas durante el embarazo.

Keep your unborn baby healthy! Ask your doctor about the risk of being poisoned to pesticides during your pregnancy.

**Es posible que entuente la ropa de trabajo con los pesticidas. Lave su ropa de trabajo aparte de la ropa de su día a día. Limpie todos los días. Los pesticidas que permanecen en su ropa pueden ser dañinos para su salud.**

It is against the law for you to be sprayed by pesticides, directly or through drift.

If you think you have a pesticide poisoning symptom:

- Immediately wash with soap and water.
- Go to the nearest doctor, hospital, or migrant health clinic.
- Have a family member or friend go with you. (Do not drive yourself).
- Take this Crop Sheet with you for the doctor.
- Tell the doctor you think you were exposed to pesticides.
- Have your doctor call to get emergency information about the pesticides from your employer or from a Poison Control Center at 1-800-441-0040 or 409-765-1420 or 1-800-392-8548.
- If the National Pesticide Telecommunications Center at 1-800-858-7378 or the Texas Department of Agriculture at 1-800-252-8239.

**Si Usted cree que tiene algún síntoma de envenenamiento con pesticidas:**

- Inmediatamente lávese con jabón y agua.
- Vaya al doctor, hospital o clínica de migrantes más cercano.
- Vaya con un familiar o un amigo (No maneje Usted mismo).
- Llevese este informe de Cosecha (Crop Sheet) para que lo vea el doctor.
- Dígame al doctor que Usted cree que ha sido expuesto a pesticidas.
- Para conseguir información de emergencia acerca de los pesticidas su doctor debe de llamar a su patron o a un Centro de Control de Venenos al 1-800-441-0040 o al 409-765-1420 o al 1-800-392-8548 o la Cadena Nacional de Telecomunicaciones sobre Pesticidas al 1-800-858-7378.
- Por ley se le requiere a los doctores reportar todos los envenenamientos por pesticidas en el trabajo al Departamento de Salud: 1-800-252-8239.

**Como Campesino Usted tiene el derecho de:**

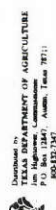
- Pedir los nombres de las químicas que se usaron en la labor.
- Recibir de cada patron los Informes de Cosecha para cada cosecha en la que Usted trabaja.
- Pedir al patron su lista de productos químicos e informes de estos productos.
- Presentar su queja al Departamento de Agricultura de Texas si sus productos han sido volados. LLAME GRATIS AL 1-800-832-7347.
- Asistir a los programas de entrenamiento de resistentes por el Departamento de Salud para el trabajador. El entrenamiento es gratuito. Llame al 1-800-832-7347 donde Usted trabaja. Comuníquese con su oficina local o llame al 1-800-832-7347.

**Es en contra de la ley que Usted sea rociado con pesticidas directamente, o indirectamente por medio del viento. Proteja yourself! Wear long sleeved shirt, long-legged pants shoes and socks, and a hat or scarf and gloves.**

**Proteja! Use camisas de mangas largas, pantalones largos, zapatos y calcetines, y un sombrero o una pañoleta y guantes. Proteja yourself! Wear long sleeved shirt, long-legged pants shoes and socks, and a hat or scarf and gloves.**

**As a farmworker you have the right to:**

- Request the names of the chemicals that have been applied to a field.
- Receive Crop Sheets each season from each employer.
- Receive the Workplace Chemical List and Material Safety Data Sheets from your employer(s) when you ask.
- File a complaint with the Texas Department of Agriculture if your rights are violated. CALL 1-800-832-7347, and attend training programs provided by the Texas Department of Agriculture or Texas Agricultural Extension Service, depending on where you work. Contact your local office or call 1-800-832-7347.



Department of AGRICULTURE  
TEXAS DEPARTMENT OF AGRICULTURE  
P.O. Box 12847, Austin, Texas 78711  
800-252-8239

MONTHLY SUMMARY OF REPORTABLE DISEASES IN TEXAS

(Counties listed below reflect only those with populations of 190,000 or more, based on 1988 population estimates.)

Cumulative through: JULY, 1989

County	Amebiasis	Campylobacteriosis	Chickenpox	Encephalitis	H. Influenzae Infections	Hepatitis A	Hepatitis B	Hepatitis NA-NB	Influenza	Measles	Meningococcal Infections	Aseptic Meningitis	Mumps	Pertussis	Rubella	Salmonella	Shigella
BEXAR	1	74	759	1	57	129	110	5	2386	66	2	50	2	15	0	66	117
BRAZORIA	0	0	17	0	0	5	6	0	38	14	2	3	2	0	0	1	4
CAMERON	20	4	424	2	13	40	4	1	2719	54	1	2	23	0	1	10	21
COLLIN	0	2	1004	0	1	24	9	1	14832	2	1	7	1	0	1	11	15
DALLAS	9	47	4322	1	66	206	163	9	13245	159	11	82	16	8	1	105	121
DENTON	0	9	30	0	7	10	4	0	595	1	0	10	0	4	0	4	3
EL PASO	1	7	746	0	5	125	62	2	150	0	0	2	4	1	1	51	25
FORT BEND	0	5	55	0	3	2	7	0	22	9	0	7	3	0	0	7	8
GALVESTON	0	4	137	0	4	34	14	0	122	2	2	10	0	0	0	8	5
HARRIS	5	40	4022	4	42	260	66	11	10443	1505	8	111	54	3	1	80	61
HIDALGO	3	8	293	1	3	13	4	1	39	330	2	2	4	0	0	27	39
JEFFERSON	0	3	349	0	6	29	23	4	677	0	2	9	176	0	0	21	22
LUBBOCK	14	3	209	0	6	9	24	3	331	311	1	5	4	1	8	29	15
MCCLENNAN	0	0	373	0	3	48	9	2	968	0	0	1	0	0	0	5	26
MONTGOMERY	0	1	91	0	1	28	9	1	4	23	0	2	4	0	0	5	0
NUECES	2	3	820	0	8	17	17	0	3483	30	1	8	0	0	0	22	28
TARRANT	1	11	1868	2	21	107	92	1	4849	40	7	24	4	19	4	61	39
TRAVIS	12	34	109	0	22	44	27	2	116	8	0	16	2	20	0	39	36
All Other Counties	21	99	4365	9	174	627	303	14	19534	436	27	68	120	36	13	336	196
Cumulative TX 1989	89	354	19993	20	442	1757	953	57	74553	2990	67	419	419	107	30	888	781
Cumulative Tx 1988	145	429	16723	44	487	1240	880	98	85625	11	62	349	140	124	9	1189	1635

1989 CUMULATIVE TOTALS FOR OTHER REPORTABLE DISEASES:

Acute Occ. Pesticide Poisoning	8	Coccidioidomycosis	21	Histoplasmosis	30	Psittacosis	0	Toxic Shock Syndrom	9
Anthrax	0	Dengue	1	Legionellosis	9	Q Fever	1	Trichinosis	0
Asbestosis *	2	Diphtheria	0	Leptospirosis	0	Rabies	0	Tuberculosis	976
Botulism	2	+ Elevated Blood Lead Levels	549	Listeria Infections	16	Reye Syndrome	0	Tularemia	0
Brucellosis	12	Gonorrhea	22660	Lyme Disease	37	Rocky Mt Spotted Fever	4	Typhoid	10
Chlamydia trachomatis	8390	Hansen's Disease	15	Malaria	31	Silicosis *	5	Typhus, Murine	3
Cholera	0	Hepatitis D (Delta Agent)	0	Plague	0	Syphilis (P&S)	2156	Vibrio Infections	1
		Hepatitis type unspecified	310	Polioyelitis	0	Tetanus	2	Yellow Fever	0

\* Blood lead level >40ug/dl in persons 15 years of age or older; summarized by date of blood lead test.

TEXAS DEPARTMENT OF HEALTH  
 TEXAS AIDS CASES: WEEKLY SURVEILLANCE REPORT  
 Case County by Residence of Onset and Year of Diagnosis  
 August 25, 1989

COUNTY	1980-1985		1986		1987		1988		1989		CUMULATIVE	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Bell	3	3	4	2	3	2	2	2	2	0	14	9
Bexar	53	50	56	49	115	82	174	58	113	21	511	260
Bowie	1	1	2	2	6	4	10	8	4	3	23	18
Brazoria	8	6	10	8	9	2	10	3	2	1	39	22
Brazos	10	10	5	4	5	5	2	1	4	2	26	22
Cameron	1	1	3	2	1	1	4	2	4	2	13	8
Collin	1	1	2	2	5	3	3	3	1	1	12	10
Dallas	250	239	305	254	495	352	485	213	202	39	1737	1097
Denton	2	2	6	6	16	14	10	5	5	0	39	27
Ector	1	1	4	4	4	3	6	1	0	0	15	9
Ellis	0	0	1	1	7	6	5	3	1	0	14	10
El Paso	5	5	9	9	19	10	15	7	14	4	62	35
Fort Bend	10	10	10	9	16	10	5	3	9	0	50	32
Galveston	11	11	16	15	23	13	21	9	13	3	84	51
Gregg	2	2	4	3	6	4	1	1	1	0	14	10
Harris	611	559	623	540	821	535	729	323	237	50	3021	2007
Hays	3	3	4	4	2	1	2	1	0	0	11	9
Hidalgo	6	6	0	0	4	3	2	1	4	0	16	10
Howard	2	2	3	3	1	0	3	3	1	0	10	8
Jefferson	7	6	8	4	20	11	18	10	5	0	58	31
Johnson	1	1	1	1	3	1	6	2	1	1	12	6
Lubbock	4	4	5	4	15	11	7	2	6	1	37	22
McLennan	2	2	6	4	6	4	3	1	1	0	18	11
Midland	1	1	0	0	6	4	4	0	0	0	11	5
Montgomery	5	5	3	2	9	6	13	9	3	2	33	24
Nueces	6	4	11	9	20	14	14	5	12	3	63	35
Orange	3	3	4	2	4	4	3	2	3	3	17	14
Potter	1	0	3	2	5	3	6	4	2	1	17	10
Smith	3	3	4	1	3	1	4	1	3	1	17	7
Tarrant	44	37	50	33	126	82	99	41	56	12	375	205
Taylor	3	3	2	2	2	2	11	5	4	1	22	13
Travis	60	50	53	37	107	64	125	48	61	10	406	209
Walker **	10	10	19	11	19	9	26	4	25	1	99	35
Webb	1	1	4	4	5	1	5	3	0	0	15	9
Wichita	1	1	2	1	6	4	12	2	0	0	21	8
Williamson	0	0	3	3	4	2	1	0	3	0	11	5
All Others	42	36	52	40	101	68	86	30	25	4	306	178

STATEWIDE	1980-1985		1986		1987		1988		1989		CUMULATIVE	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
	1174	1081	1297	1077	2019	1341	1932	816	827	166	7249	4481
CFR %	CFR%	92	CFR%	83	CFR%	66	CFR%	42	CFR%	20	CFR%	62

\* COUNTIES LISTED INDIVIDUALLY ARE THOSE WITH A CUMULATIVE TOTAL OF 10+  
 \*\* 90 CASES WERE DIAGNOSED WHILE TEXAS DEPARTMENT OF CORRECTION INMATES

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