

COMPLETE HERE

OMB #: 0925-0406
Expiration Date: 08/31/96

Agricultural Health Study

Enrollment Questionnaire - Private Applicator

[CODED MANUAL]



**This questionnaire will take approximately
25 minutes to complete.**

Public reporting burden for this collection of information is estimated to average 25 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: PHS Reports Clearance Officer, Rm. 721-B, Humphrey Building, 200 Independence Ave., SW, Washington, D.C. 20201, ATTN: PRA; and to Office of Management and Budget, Paperwork Reduction Project (0925-0406), Washington, D.C. 20503.

Dear Applicator:

We are asking for your help in carrying out an important scientific study that the University of Iowa Medical Center and Survey Research Associates (Durham, NC) are conducting in cooperation with the National Institutes of Health (NIH) and the Office of Research and Development of the US Environmental Protection Agency (USEPA). The study is being conducted in Iowa and North Carolina and investigates environmental factors, occupation and diet and their effects on an individual's health.

The study will give you information you may find helpful in making decisions for your health and the health of your family. The information will be provided through the cooperative extension service, state and county health departments, articles in trade magazines, and public service announcements on radio and TV. You can request study reports by calling the Agricultural Health Study's toll-free number 1-800-4AG-STUDY.

We are asking you to complete this questionnaire about your lifestyle, pesticide use, occupational history, medical history and diet. You are free to skip any question at any point in the form. You will also be given a packet to take home with you requesting more detailed information about your work activities and health.

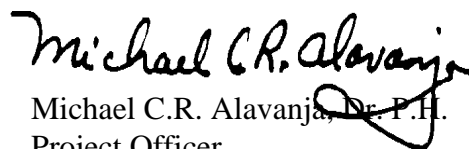
Your participation is very important to the success of the study. All information that you give us will be treated with care and will not be released to anyone but researchers conducting the study or as required by law. Confidential information like your name and address will be stored in locked files accessible only to study staff. Your name will not be used in any reports. The study results will be reported in statistical summary form only.

You may be contacted in the future to take part in related research studies. Your decision to be a part of future studies will also be voluntary.

Please read the instructions on the next page before filling out this form. The form should take about 25 minutes to complete. If you have any questions about the study, or problems with questions in this questionnaire, please contact officials in this room overseeing the pesticide applicator licensing or training class. Whether or not you decide to participate, please return this questionnaire to these officials.

Thank you for cooperation in this important research project.

Sincerely,

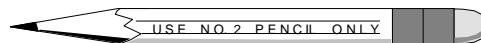
A handwritten signature in black ink that reads "Michael C.R. Alavanja". The signature is fluid and cursive, with the last name being more prominent.

Michael C.R. Alavanja, Dr. P.H.
Project Officer
National Institutes of Health

Privacy Act Notification: 42 U.S.C. 285a of the Public Health Service Act authorizes collection of this information. It will be used to evaluate the role of agricultural exposures and other factors in the development of cancer, neurological disease, birth defects and other chronic diseases. All information is voluntary and a decision not to provide all or any part of the requested information will not affect your certification or licensing. The Government may disclose this information to a Congressional Office upon your request, to the Department of Justice in the event of litigation; or to the Government contractors and collaborating researchers who are analyzing the study data.

DIRECTIONS

C Please use a pencil to complete this form.



C Many of the questions will ask you to estimate amounts or to specify a year. We know that you cannot be exact with many of these. We ask that you estimate as best you can when you are not sure.

C Be certain to write your answer in the area provided **and also** completely fill the matching ovals. Erase completely if you make any changes.

The following kinds of marks **will NOT** work: ☐ ☐ ☐ ☐

The following kind of marks will work: ☐ ☒ ☒ ☐

C Mark **only one** answer to each question except where you are directed to "Mark all that apply." Do not make any other marks on this form. If you wish to make comments, please write them under the heading "Additional Comments" at the end of the form.

EXAMPLE: To record the response "July 4, 1993:"

Month	Day	Write the numbers in boxes.	19	Year
<input type="radio"/> Jan	<input type="radio"/> 10 <input type="radio"/> 20 <input type="radio"/> 30	<p>Then fill in the matching ovals below each box.</p>	<div style="border: 1px solid black; display: inline-block; padding: 2px;">9</div> <div style="border: 1px solid black; display: inline-block; padding: 2px;">3</div>	<input type="radio"/> 0 <input type="radio"/> 0
<input type="radio"/> Feb	<input type="radio"/> 1 <input type="radio"/> 11 <input type="radio"/> 21 <input type="radio"/> 31			<input type="radio"/> 1 <input type="radio"/> 1
<input type="radio"/> Mar	<input type="radio"/> 2 <input type="radio"/> 12 <input type="radio"/> 22	<input type="radio"/> 2 <input type="radio"/> 2		<input type="radio"/> 2 <input type="radio"/> 2
<input type="radio"/> Apr	<input type="radio"/> 3 <input type="radio"/> 13 <input type="radio"/> 23	<input type="radio"/> 3 <input type="radio"/> 3		<input type="radio"/> 3 <input type="radio"/> 3
<input type="radio"/> May	<input checked="" type="radio"/> 4 <input type="radio"/> 14 <input type="radio"/> 24	<input type="radio"/> 4 <input type="radio"/> 4		<input checked="" type="radio"/> 4 <input type="radio"/> 4
<input type="radio"/> Jun	<input type="radio"/> 5 <input type="radio"/> 15 <input type="radio"/> 25	<input type="radio"/> 5 <input type="radio"/> 5		<input type="radio"/> 5 <input type="radio"/> 5
<input checked="" type="radio"/> Jul	<input type="radio"/> 6 <input type="radio"/> 16 <input type="radio"/> 26	<input type="radio"/> 6 <input type="radio"/> 6		<input type="radio"/> 6 <input type="radio"/> 6
<input type="radio"/> Aug	<input type="radio"/> 7 <input type="radio"/> 17 <input type="radio"/> 27	<input type="radio"/> 7 <input type="radio"/> 7		<input type="radio"/> 7 <input type="radio"/> 7
<input type="radio"/> Sep	<input type="radio"/> 8 <input type="radio"/> 18 <input type="radio"/> 28	<input type="radio"/> 8 <input type="radio"/> 8		<input type="radio"/> 8 <input type="radio"/> 8
<input type="radio"/> Oct	<input type="radio"/> 9 <input type="radio"/> 19 <input type="radio"/> 29	<input checked="" type="radio"/> 9 <input type="radio"/> 9		<input checked="" type="radio"/> 9 <input type="radio"/> 9
<input type="radio"/> Nov				
<input type="radio"/> Dec				

BEGIN HERE

I. General Information

1. What is today's date?

[atmonth]

[atday]

[atyear]

[a_enrolldt]

Month

Day

Year

SAS date

<input type="radio"/> Jan	<input type="radio"/> 10 <input type="radio"/> 20 <input type="radio"/> 30	<input type="radio"/> 1993
<input type="radio"/> Feb	<input type="radio"/> 1 <input type="radio"/> 11 <input type="radio"/> 21 <input type="radio"/> 31	<input type="radio"/> 1994
<input type="radio"/> Mar	<input type="radio"/> 2 <input type="radio"/> 12 <input type="radio"/> 22	<input type="radio"/> 1995
<input type="radio"/> Apr	<input type="radio"/> 3 <input type="radio"/> 13 <input type="radio"/> 23	<input type="radio"/> 1996
<input type="radio"/> May	<input type="radio"/> 4 <input type="radio"/> 14 <input type="radio"/> 24	
<input type="radio"/> Jun	<input type="radio"/> 5 <input type="radio"/> 15 <input type="radio"/> 25	
<input type="radio"/> Jul	<input type="radio"/> 6 <input type="radio"/> 16 <input type="radio"/> 26	
<input type="radio"/> Aug	<input type="radio"/> 7 <input type="radio"/> 17 <input type="radio"/> 27	
<input type="radio"/> Sep	<input type="radio"/> 8 <input type="radio"/> 18 <input type="radio"/> 28	
<input type="radio"/> Oct	<input type="radio"/> 9 <input type="radio"/> 19 <input type="radio"/> 29	
<input type="radio"/> Nov		
<input type="radio"/> Dec		

Month Day Year

DO NOT WRITE OUTSIDE BOX

[abyear] [a_birthdt]
Year SAS date

2. What is your birth date? *Print your birthday here:*
Now fill in the ovals and boxes below:

[abmonth] [abday]
Month Day

- | | | | |
|---------------------------|--------------------------|--------------------------|--------------------------|
| <input type="radio"/> Jan | <input type="radio"/> 10 | <input type="radio"/> 20 | <input type="radio"/> 30 |
| <input type="radio"/> Feb | <input type="radio"/> 1 | <input type="radio"/> 11 | <input type="radio"/> 21 |
| <input type="radio"/> Mar | <input type="radio"/> 2 | <input type="radio"/> 12 | <input type="radio"/> 22 |
| <input type="radio"/> Apr | <input type="radio"/> 3 | <input type="radio"/> 13 | <input type="radio"/> 23 |
| <input type="radio"/> May | <input type="radio"/> 4 | <input type="radio"/> 14 | <input type="radio"/> 24 |
| <input type="radio"/> Jun | <input type="radio"/> 5 | <input type="radio"/> 15 | <input type="radio"/> 25 |
| <input type="radio"/> Jul | <input type="radio"/> 6 | <input type="radio"/> 16 | <input type="radio"/> 26 |
| <input type="radio"/> Aug | <input type="radio"/> 7 | <input type="radio"/> 17 | <input type="radio"/> 27 |
| <input type="radio"/> Sep | <input type="radio"/> 8 | <input type="radio"/> 18 | <input type="radio"/> 28 |
| <input type="radio"/> Oct | <input type="radio"/> 9 | <input type="radio"/> 19 | <input type="radio"/> 29 |
| <input type="radio"/> Nov | | | |
| <input type="radio"/> Dec | | | |

Write the numbers in
the boxes.

o

19

Then fill in the
matching ovals below
each box.

o

<input type="radio"/> 0	<input type="radio"/> 0
<input type="radio"/> 1	<input type="radio"/> 1
<input type="radio"/> 2	<input type="radio"/> 2
<input type="radio"/> 3	<input type="radio"/> 3
<input type="radio"/> 4	<input type="radio"/> 4
<input type="radio"/> 5	<input type="radio"/> 5
<input type="radio"/> 6	<input type="radio"/> 6
<input type="radio"/> 7	<input type="radio"/> 7
<input type="radio"/> 8	<input type="radio"/> 8
<input type="radio"/> 9	<input type="radio"/> 9

3. Which of the following groups *best* describes your race?

[arace]

- ☐ White
☐ Black
☐ American Indian or Alaskan Native
☐ Asian or Pacific Islander
☐ Other (*Please describe below*)

DO NOT WRITE OUTSIDE BOX

4. Are you of Hispanic origin?

[ahispan]

- ☐ No ☐ Yes

5. What is the highest level of schooling you have completed? (*Mark only one.*)

[aschool]

- ☐ 1–8 years
☐ Some high school
☐ High school graduate
☐ GED (high school equivalency)
☐ 1–3 years vocational education beyond high school
☐ Some college
☐ College graduate
☐ One or more years of graduate school or professional school
☐ Something else (*Please describe below*)

DO NOT WRITE OUTSIDE BOX

6. How many children do you have? (Include living, deceased, stepchildren and adopted children.)

[achildrn]

- | | | |
|----------------------------|--------------------------|------------------------------------|
| <input type="radio"/> None | <input type="radio"/> 10 | <input type="radio"/> 20 |
| <input type="radio"/> 1 | <input type="radio"/> 11 | <input type="radio"/> More than 20 |
| <input type="radio"/> 2 | <input type="radio"/> 12 | |
| <input type="radio"/> 3 | <input type="radio"/> 13 | |
| <input type="radio"/> 4 | <input type="radio"/> 14 | |
| <input type="radio"/> 5 | <input type="radio"/> 15 | |
| <input type="radio"/> 6 | <input type="radio"/> 16 | |
| <input type="radio"/> 7 | <input type="radio"/> 17 | |
| <input type="radio"/> 8 | <input type="radio"/> 18 | |
| <input type="radio"/> 9 | <input type="radio"/> 19 | |

7. Did you father (or give birth to) a baby in the last 9 years?

[ababy9yr]

- ☐ No ☐ Yes

8. Are any of these children living with you now? (Mark only one.)

[alivenow]

- ☐ No ☐ Yes
☐ Didn't have a baby in last 9 years

II. Pesticide Use

9. Mark *all* types of pesticide applications which you have done at any time in the past 12 months.

- | | | | |
|--|------------|--|------------|
| <input type="radio"/> Termite control | [apstap1] | <input type="radio"/> Insecticide applications to farm crops | [apstap11] |
| <input type="radio"/> Rodent control | [apstap2] | <input type="radio"/> Insecticide applications to farm animals/
animal shelters | [apstap12] |
| <input type="radio"/> Lawn and garden | [apstap3] | <input type="radio"/> Insecticide applications to pets | [apstap13] |
| <input type="radio"/> Greenhouse | [apstap4] | <input type="radio"/> Insecticide applications in home(s) | [apstap14] |
| <input type="radio"/> Stored grain or other stored
agricultural products | [apstap5] | <input type="radio"/> Insecticide applications in commercial
buildings | [apstap15] |
| <input type="radio"/> Highway right-of-way weed
control | [apstap6] | <input type="radio"/> Fungicides (chemicals for controlling
disease on crops) | [apstap16] |
| <input type="radio"/> Forestry applications | [apstap7] | <input type="radio"/> Fumigants (gases or liquids that turn into gas
when released) | [apstap17] |
| <input type="radio"/> Aerial spraying | [apstap8] | <input type="radio"/> None of these | [apstap18] |
| <input type="radio"/> Herbicide (weed killers) applications
to farm crops | [apstap9] | | |
| <input type="radio"/> Other (Please specify) | [apstap10] | | |

DO NOT WRITE OUTSIDE BOX

For the next questions, you may have to give us your best estimate.

10. During your lifetime, have you ever personally mixed or applied any pesticides? (Include crop, livestock, and structural insecticides, herbicides, fungicides and fumigants. Include pesticides used for farm use, commercial application and personal use in your home or garden.)

[amixpers]

☐ No [GO TO QUESTION 11]

☐ Yes

[ayrsmix]

10a. How many years did you personally mix or apply pesticides?

- ☐ 1 year or less
☐ 2–5 years
☐ 6–10 years
☐ 11–20 years
☐ 21–30 years
☐ More than 30 years

[amixdpy]

10b. During those years, how many days per year did you personally mix or apply pesticides?

- ☐ Less than 5 days
☐ 5–9 days
☐ 10–19 days
☐ 20–39 days
☐ 40–59 days
☐ 60–150 days
☐ More than 150 days

[apctmix]

10c. When pesticides require mixing, what percent of the time to you personally do the mixing?

- ☐ Never
☐ Less than 50% of the time
☐ 50% or more of the time

[apctappl]

10d. What percent of the application do you personally do?

- ☐ None
☐ Less than 50% of the time
☐ 50% or more of the time

11. Please complete the following questions about your personal use of the specific pesticides listed below. We realize this is not a complete list of pesticides. We are interested in learning about those you are currently using as well as those you've personally used in the past.

First answer the question in Column A. If you answered "Yes" then answer the questions in Column B, C and D for that pesticide. If you answered "No" then go on to the next pesticide. Be sure to answer Column A ("No" or "Yes") for each pesticide listed.

Name of Pesticide	A. Have you ever personally mixed or applied this pesticide?	B. How many years did you personally mix or apply this pesticide?	C. In an average year when you personally used this pesticide, how many days did you it?	D. When did you first personally use this pesticide?
Herbicides (pesticides used to kill weeds)				
a. Aatrex, Atranex or other <i>atrazine</i> products	[a_herbicide_cd1] <input type="radio"/> No <input type="radio"/> Yes	[a_herbicide_yr1] <input type="radio"/> 1 year or less <input type="radio"/> 2–5 years <input type="radio"/> 6–10 years <input type="radio"/> 11–20 years <input type="radio"/> 21–30 years <input type="radio"/> More than 30 years	[a_herbicide_day1] <input type="radio"/> Less than 5 days <input type="radio"/> 5–9 days <input type="radio"/> 10–19 days <input type="radio"/> 20–39 days <input type="radio"/> 40–59 days <input type="radio"/> 60–150 days <input type="radio"/> More than 150 days	[a_herbicide_fu1] <input type="radio"/> Before 1960 <input type="radio"/> In the 1960s <input type="radio"/> In the 1970s <input type="radio"/> In the 1980s <input type="radio"/> In the 1990s <input type="radio"/> Mark here if you used this pesticide last year [a_herbicide_ls1]
b. Banvel, Metambane or other <i>dicamba</i> products	[a_herbicide_cd2] <input type="radio"/> No <input type="radio"/> Yes	[a_herbicide_yr2] <input type="radio"/> 1 year or less <input type="radio"/> 2–5 years <input type="radio"/> 6–10 years <input type="radio"/> 11–20 years <input type="radio"/> 21–30 years <input type="radio"/> More than 30 years	[a_herbicide_day2] <input type="radio"/> Less than 5 days <input type="radio"/> 5–9 days <input type="radio"/> 10–19 days <input type="radio"/> 20–39 days <input type="radio"/> 40–59 days <input type="radio"/> 60–150 days <input type="radio"/> More than 150 days	[a_herbicide_fu2] <input type="radio"/> Before 1960 <input type="radio"/> In the 1960s <input type="radio"/> In the 1970s <input type="radio"/> In the 1980s <input type="radio"/> In the 1990s <input type="radio"/> Mark here if you used this pesticide last year [a_herbicide_ls2]

Name of Pesticide	A. Have you ever personally mixed or applied this pesticide?	B. How many years did you personally mix or apply this pesticide?	C. In an average year when you personally used this pesticide, how many days did you it?	D. When did you <u>first</u> personally use this pesticide?
Crop, Nursery, Lawn and Garden Insecticides				
h. Roundup, Jury or other <i>glyphosate</i> products	[a_herbicide_cd13] <input type="radio"/> No <input type="radio"/> Yes ^o	[a_herbicide_yr13] <input type="radio"/> 1 year or less <input type="radio"/> 2–5 years <input type="radio"/> 6–10 years <input type="radio"/> 11–20 years <input type="radio"/> 21–30 years <input type="radio"/> More than 30 years	[a_herbicide_day13] <input type="radio"/> Less than 5 days <input type="radio"/> 5–9 days <input type="radio"/> 10–19 days <input type="radio"/> 20–39 days <input type="radio"/> 40–59 days <input type="radio"/> 60–150 days <input type="radio"/> More than 150 days	[a_herbicide_fu13] <input type="radio"/> Before 1960 <input type="radio"/> In the 1960s <input type="radio"/> In the 1970s <input type="radio"/> In the 1980s <input type="radio"/> In the 1990s <input type="radio"/> Mark here if you used this pesticide last year [a_herbicide_ls13]
i. Treflan, Trilin, Commence or other <i>trifluralin</i> products	[a_herbicide_cd16] <input type="radio"/> No <input type="radio"/> Yes ^o	[a_herbicide_yr16] <input type="radio"/> 1 year or less <input type="radio"/> 2–5 years <input type="radio"/> 6–10 years <input type="radio"/> 11–20 years <input type="radio"/> 21–30 years <input type="radio"/> More than 30 years	[a_herbicide_day16] <input type="radio"/> Less than 5 days <input type="radio"/> 5–9 days <input type="radio"/> 10–19 days <input type="radio"/> 20–39 days <input type="radio"/> 40–59 days <input type="radio"/> 60–150 days <input type="radio"/> More than 150 days	[a_herbicide_fu16] <input type="radio"/> Before 1960 <input type="radio"/> In the 1960s <input type="radio"/> In the 1970s <input type="radio"/> In the 1980s <input type="radio"/> In the 1990s <input type="radio"/> Mark here if you used this pesticide last year [a_herbicide_ls16]
j. 2,4-D	[a_herbicide_cd17] <input type="radio"/> No <input type="radio"/> Yes ^o	[a_herbicide_yr17] <input type="radio"/> 1 year or less <input type="radio"/> 2–5 years <input type="radio"/> 6–10 years <input type="radio"/> 11–20 years <input type="radio"/> 21–30 years <input type="radio"/> More than 30 years	[a_herbicide_day17] <input type="radio"/> Less than 5 days <input type="radio"/> 5–9 days <input type="radio"/> 10–19 days <input type="radio"/> 20–39 days <input type="radio"/> 40–59 days <input type="radio"/> 60–150 days <input type="radio"/> More than 150 days	[a_herbicide_fu17] <input type="radio"/> Before 1960 <input type="radio"/> In the 1960s <input type="radio"/> In the 1970s <input type="radio"/> In the 1980s <input type="radio"/> In the 1990s <input type="radio"/> Mark here if you used this pesticide last year [a_herbicide_ls17]
Crop, Nursery, Lawn and Garden Insecticides				
k. Ambush, Pounce, Asana or other <i>permethrin or pyrethroid</i> products	[a_insecticide_cd1] <input type="radio"/> No <input type="radio"/> Yes ^o	[a_insecticide_yr1] <input type="radio"/> 1 year or less <input type="radio"/> 2–5 years <input type="radio"/> 6–10 years <input type="radio"/> 11–20 years <input type="radio"/> 21–30 years <input type="radio"/> More than 30 years	[a_insecticide_day1] <input type="radio"/> Less than 5 days <input type="radio"/> 5–9 days <input type="radio"/> 10–19 days <input type="radio"/> 20–39 days <input type="radio"/> 40–59 days <input type="radio"/> 60–150 days <input type="radio"/> More than 150 days	[a_insecticide_fu1] <input type="radio"/> Before 1960 <input type="radio"/> In the 1960s <input type="radio"/> In the 1970s <input type="radio"/> In the 1980s <input type="radio"/> In the 1990s <input type="radio"/> Mark here if you used this pesticide last year [a_insecticide_ls1]
l. Counter or other <i>terbufos</i> products	[a_insecticide_cd3] <input type="radio"/> No <input type="radio"/> Yes ^o	[a_insecticide_yr3] <input type="radio"/> 1 year or less <input type="radio"/> 2–5 years <input type="radio"/> 6–10 years <input type="radio"/> 11–20 years <input type="radio"/> 21–30 years <input type="radio"/> More than 30 years	[a_insecticide_day3] <input type="radio"/> Less than 5 days <input type="radio"/> 5–9 days <input type="radio"/> 10–19 days <input type="radio"/> 20–39 days <input type="radio"/> 40–59 days <input type="radio"/> 60–150 days <input type="radio"/> More than 150 days	[a_insecticide_fu3] <input type="radio"/> Before 1960 <input type="radio"/> In the 1960s <input type="radio"/> In the 1970s <input type="radio"/> In the 1980s <input type="radio"/> In the 1990s <input type="radio"/> Mark here if you used this pesticide last year [a_insecticide_ls3]

Name of Pesticide	A. Have you ever personally mixed or applied this pesticide?	B. How many years did you personally mix or apply this pesticide?	C. In an average year when you personally used this pesticide, how many days did you it?	D. When did you <u>first</u> personally use this pesticide?
Crop and Livestock Insecticides				
m. Dyfonate or other <i>fonofos</i> products	[a_insecticide_cd4] <input type="radio"/> No <input type="radio"/> Yes ^o	[a_insecticide_yr4] <input type="radio"/> 1 year or less <input type="radio"/> 2–5 years <input type="radio"/> 6–10 years <input type="radio"/> 11–20 years <input type="radio"/> 21–30 years <input type="radio"/> More than 30 years	[a_insecticide_day4] <input type="radio"/> Less than 5 days <input type="radio"/> 5–9 days <input type="radio"/> 10–19 days <input type="radio"/> 20–39 days <input type="radio"/> 40–59 days <input type="radio"/> 60–150 days <input type="radio"/> More than 150 days	[a_insecticide_fu4] <input type="radio"/> Before 1960 <input type="radio"/> In the 1960s <input type="radio"/> In the 1970s <input type="radio"/> In the 1980s <input type="radio"/> In the 1990s <input type="radio"/> Mark here if you used this pesticide last year [a_insecticide_ls4]
n. Dylox or other <i>trichlorfon</i> products	[a_insecticide_cd5] <input type="radio"/> No <input type="radio"/> Yes ^o	[a_insecticide_yr5] <input type="radio"/> 1 year or less <input type="radio"/> 2–5 years <input type="radio"/> 6–10 years <input type="radio"/> 11–20 years <input type="radio"/> 21–30 years <input type="radio"/> More than 30 years	[a_insecticide_day5] <input type="radio"/> Less than 5 days <input type="radio"/> 5–9 days <input type="radio"/> 10–19 days <input type="radio"/> 20–39 days <input type="radio"/> 40–59 days <input type="radio"/> 60–150 days <input type="radio"/> More than 150 days	[a_insecticide_fu5] <input type="radio"/> Before 1960 <input type="radio"/> In the 1960s <input type="radio"/> In the 1970s <input type="radio"/> In the 1980s <input type="radio"/> In the 1990s <input type="radio"/> Mark here if you used this pesticide last year [a_insecticide_ls5]
o. Furadan, Curaterr or other <i>carbofuran</i> products	[a_insecticide_cd7] <input type="radio"/> No <input type="radio"/> Yes ^o	[a_insecticide_yr7] <input type="radio"/> 1 year or less <input type="radio"/> 2–5 years <input type="radio"/> 6–10 years <input type="radio"/> 11–20 years <input type="radio"/> 21–30 years <input type="radio"/> More than 30 years	[a_insecticide_day7] <input type="radio"/> Less than 5 days <input type="radio"/> 5–9 days <input type="radio"/> 10–19 days <input type="radio"/> 20–39 days <input type="radio"/> 40–59 days <input type="radio"/> 60–150 days <input type="radio"/> More than 150 days	[a_insecticide_fu7] <input type="radio"/> Before 1960 <input type="radio"/> In the 1960s <input type="radio"/> In the 1970s <input type="radio"/> In the 1980s <input type="radio"/> In the 1990s <input type="radio"/> Mark here if you used this pesticide last year [a_insecticide_ls7]
Crop and Livestock Insecticides				
p. Lorsban, Dursban or other <i>chlorpyrifos</i> products	[a_insecticide_cd8] <input type="radio"/> No <input type="radio"/> Yes ^o	[a_insecticide_yr8] <input type="radio"/> 1 year or less <input type="radio"/> 2–5 years <input type="radio"/> 6–10 years <input type="radio"/> 11–20 years <input type="radio"/> 21–30 years <input type="radio"/> More than 30 years	[a_insecticide_day8] <input type="radio"/> Less than 5 days <input type="radio"/> 5–9 days <input type="radio"/> 10–19 days <input type="radio"/> 20–39 days <input type="radio"/> 40–59 days <input type="radio"/> 60–150 days <input type="radio"/> More than 150 days	[a_insecticide_fu8] <input type="radio"/> Before 1960 <input type="radio"/> In the 1960s <input type="radio"/> In the 1970s <input type="radio"/> In the 1980s <input type="radio"/> In the 1990s <input type="radio"/> Mark here if you used this pesticide last year [a_insecticide_ls8]
Poultry/Livestock/Animal Confinement Area Insecticides				
q. Co-Ral or other <i>coumaphos</i> products	[a_insecticide_cd21] <input type="radio"/> No <input type="radio"/> Yes ^o	[a_insecticide_yr21] <input type="radio"/> 1 year or less <input type="radio"/> 2–5 years <input type="radio"/> 6–10 years <input type="radio"/> 11–20 years <input type="radio"/> 21–30 years <input type="radio"/> More than 30 years	[a_insecticide_day21] <input type="radio"/> Less than 5 days <input type="radio"/> 5–9 days <input type="radio"/> 10–19 days <input type="radio"/> 20–39 days <input type="radio"/> 40–59 days <input type="radio"/> 60–150 days <input type="radio"/> More than 150 days	[a_insecticide_fu21] <input type="radio"/> Before 1960 <input type="radio"/> In the 1960s <input type="radio"/> In the 1970s <input type="radio"/> In the 1980s <input type="radio"/> In the 1990s <input type="radio"/> Mark here if you used this pesticide last year [a_insecticide_ls21]

12. *In your lifetime, have you personally mixed or applied any of the following other pesticides?*

Be sure to answer No or Yes to each pesticide listed.

Pesticides		No	Yes
Crop, Nursery, Lawn and Garden, or Livestock Insecticides			
a. Forlin, Gamaphex or other <i>lindane</i> products	[a_ever_insecticide6]	<input type="radio"/>	<input type="radio"/>
b. Malathion	[a_ever_insecticide9]	<input type="radio"/>	<input type="radio"/>
c. Parathion (ethyl or methyl)	[a_ever_insecticide10]	<input type="radio"/>	<input type="radio"/>
d. Sevin, Carbamine or other <i>carbaryl</i> products	[a_ever_insecticide11]	<input type="radio"/>	<input type="radio"/>
e. Spectracide, Dianon or other <i>diazinon</i> products	[a_ever_insecticide12]	<input type="radio"/>	<input type="radio"/>
f. Temik or other <i>aldicarb</i> products	[a_ever_insecticide13]	<input type="radio"/>	<input type="radio"/>
g. Thimet, Rampart or other <i>phorate</i> products	[a_ever_insecticide14]	<input type="radio"/>	<input type="radio"/>
h. Aldrin (<i>no longer on market</i>)	[a_ever_insecticide15]	<input type="radio"/>	<input type="radio"/>
i. Chlordane (<i>no longer on market</i>)	[a_ever_insecticide16]	<input type="radio"/>	<input type="radio"/>
j. Dieldrin (<i>no longer on market</i>)	[a_ever_insecticide17]	<input type="radio"/>	<input type="radio"/>
k. DDT (<i>no longer on market</i>)	[a_ever_insecticide18]	<input type="radio"/>	<input type="radio"/>
l. Heptachlor (<i>no longer on market</i>)	[a_ever_insecticide19]	<input type="radio"/>	<input type="radio"/>
m. Toxaphene (<i>no longer on market</i>)	[a_ever_insecticide20]	<input type="radio"/>	<input type="radio"/>
Herbicides			
n. Classic or other <i>chlorimuronethyl</i> products	[a_ever_herbicide4]	<input type="radio"/>	<input type="radio"/>
o. Lexone, Sencor or other <i>metribuzin</i> products	[a_ever_herbicide8]	<input type="radio"/>	<input type="radio"/>
p. Paraquat	[a_ever_herbicide9]	<input type="radio"/>	<input type="radio"/>
q. Petroleum oil/petroleum distillate	[a_ever_herbicide10]	<input type="radio"/>	<input type="radio"/>
r. Prowl or other <i>pendimethalin</i> products	[a_ever_herbicide11]	<input type="radio"/>	<input type="radio"/>
s. Sutan, Genate or other <i>butylate</i> products	[a_ever_herbicide15]	<input type="radio"/>	<input type="radio"/>
t. Silvex or other <i>2,4,5 T P</i> products (<i>no longer on market</i>)	[a_ever_herbicide14]	<input type="radio"/>	<input type="radio"/>
u. <i>2,4,5 T</i> (<i>no longer on market</i>)	[a_ever_herbicide18]	<input type="radio"/>	<input type="radio"/>

Pesticides		No	Yes
Fungicides			
v. Benlate, Tersan or other <i>benomyl</i> products	[a_ever_fungicide1]	<input type="radio"/>	<input type="radio"/>
w. Manex, Manzate, Dithane Z-78 or other <i>maneb</i> or <i>mancozeb</i> products	[a_ever_fungicide4]	<input type="radio"/>	<input type="radio"/>
x. Ridomil, Subdue or other <i>metalaxyl</i> products	[a_ever_fungicide5]	<input type="radio"/>	<input type="radio"/>
y. Zirex, Corozate or other <i>ziram</i> products	[a_ever_fungicide6]	<input type="radio"/>	<input type="radio"/>
Fumigants			
z. Phostoxin, Gastoxin or other <i>aluminum phosphide</i> products	[a_ever_fumigant2]	<input type="radio"/>	<input type="radio"/>
aa. Carbon tetrachloride/carbon disulfide (80/20 mix) (no longer on market)	[a_ever_fumigant3]	<input type="radio"/>	<input type="radio"/>
bb. EDB, E-D-Bee, Bromofume or other <i>ethylene dibromide</i> products (no longer on market)	[a_ever_fumigant4]	<input type="radio"/>	<input type="radio"/>

13. Are there other pesticides that you use(d) regularly?

[aocropin]

☐ No [GO TO QUESTION 14]

☐ Yes (Please use space below to list pesticides.)

Additional Pesticides:

DO NOT WRITE OUTSIDE BOX

14. How often, if ever, have you had the following symptoms that you think may be related to your using pesticides?

	<u>Never or Rarely</u>	<u>Sometimes</u>	<u>Frequently/Almost Always</u>	
a. been excessively tired?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	[aphycon1]
b. had headaches/dizziness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	[aphycon2]
c. had nausea or vomiting?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	[aphycon3]
d. had skin irritation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	[aphycon4]
e. had eye irritation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	[aphycon5]
f. had chest discomfort?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	[aphycon6]
g. felt nervous or depressed?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	[aphycon7]

15. As a result of *using pesticides*, how often have you:

	<u>Never</u>	<u>Once</u>	<u>Twice</u>	<u>3 or more Times</u>	
a. seen a doctor?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	[amedcon1]
b. been hospitalized?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	[amedcon2]

16. How do you personally apply pesticides? *(Mark all that apply.)*

- | | | |
|--|--|---|
| <input type="radio"/> Do not personally apply pesticides [aapmth1] | <input type="radio"/> In furrow or banded [aapmth8] | <input type="radio"/> Inject animals [aapmth15] |
| <input type="radio"/> Airblast [aapmth2] | <input type="radio"/> Seed treatment [aapmth9] | <input type="radio"/> Dip animals [aapmth16] |
| <input type="radio"/> Boom on tractor, truck, or trailer [aapmth3] | <input type="radio"/> Distribute tablets/granules [aapmth10] | <input type="radio"/> Spray animals [aapmth17] |
| <input type="radio"/> Hand spray gun [aapmth4] | <input type="radio"/> Pour fumigant from bucket [aapmth11] | <input type="radio"/> Ear tags [aapmth18] |
| <input type="radio"/> Backpack sprayer [aapmth5] | <input type="radio"/> Gas canister [aapmth12] | <input type="radio"/> Dust/pour on animals [aapmth19] |
| <input type="radio"/> Mist blower/fogger [aapmth6] | <input type="radio"/> Row fumigation [aapmth13] | <input type="radio"/> None of these [aapmth20] |
| <input type="radio"/> Aerial (aircraft application) [aapmth7] | <input type="radio"/> Powder duster [aapmth14] | <input type="radio"/> Other [aapmth21] |

DO NOT WRITE OUTSIDE BOX

17. What type of protective equipment do you generally wear when you personally handle pesticides?

(Mark all that apply.)

- | | |
|---|------------|
| <input type="radio"/> Do not personally handle pesticides | [aproteq1] |
| <input type="radio"/> Never use protective equipment | [aproteq2] |
| <input type="radio"/> Cartridge respirator or gas mask | [aproteq3] |
| <input type="radio"/> Face shields or goggles | [aproteq4] |
| <input type="radio"/> Disposable outer clothing (like Tyvek®) | [aproteq5] |
| <input type="radio"/> Fabric/leather gloves | [aproteq6] |
| <input type="radio"/> Chemically resistant gloves (for example, neoprene or nitrile gloves) | [aproteq7] |
| <input type="radio"/> Other protective clothing (boots, apron, waterproof pants) | [aproteq8] |

18. Which of the following activities do you perform at least once each year? *(Mark all the activities you perform.)*

- | | | | |
|--|-----------|--|------------|
| <input type="radio"/> Repair engines (do not include changing oil or changing batteries) | [adoslf1] | <input type="radio"/> Grind animal feed | [adoslf8] |
| <input type="radio"/> Provide veterinary services to your livestock | [adoslf2] | <input type="radio"/> Work in swine confinement areas | [adoslf9] |
| <input type="radio"/> Butcher animals | [adoslf3] | <input type="radio"/> Work in poultry confinement areas | [adoslf10] |
| <input type="radio"/> Replace asbestos brake linings | [adoslf4] | <input type="radio"/> Load or unload silage | [adoslf11] |
| <input type="radio"/> Repair pesticide application equipment | [adoslf5] | <input type="radio"/> Weld | [adoslf12] |
| <input type="radio"/> Handle stored grain | [adoslf6] | <input type="radio"/> Paint | [adoslf13] |
| <input type="radio"/> Handle stored hay | [adoslf7] | <input type="radio"/> Do not perform any of these activities | [adoslf14] |

III. Lifestyle Activities

The next two questions ask how often, on average, you ate vegetables and fruits **during the past 12 months**. Be sure to include foods that were eaten away from home, such as in restaurants, cafeterias, at a friends house, or at work. If you rarely or never ate these foods, mark "Less than one per week."

19. About how many servings of vegetables did you usually eat, not counting salad or potatoes?

[aveget]

- ☐ Less than one per week
- ☐ 1–2 per week
- ☐ 3–4 per week
- ☐ 5–6 per week
- ☐ 1 per day
- ☐ 1½ per day
- ☐ 2 per day
- ☐ 3 per day
- ☐ 4 or more per day

20. About how many servings of fruit did you usually eat, not counting juices?

[afruit]

- ☐ Less than one per week
- ☐ 1–2 per week
- ☐ 3–4 per week
- ☐ 5–6 per week
- ☐ 1 per day
- ☐ 1½ per day
- ☐ 2 per day
- ☐ 3 per day
- ☐ 4 or more per day

The next two questions ask you about your general habits concerning alcoholic beverages. For these questions, a **drink** is defined as one beer, a glass of wine, or a shot of hard liquor.

21. During the past 12 months, how often did you usually drink any kind of alcoholic beverage?

[aalcfreq]

- ☐ Never
- ☐ Less than one time a month
- ☐ 1–3 times a month
- ☐ 1 time a week
- ☐ 2–4 times a week
- ☐ Almost every day
- ☐ Every day

22. During the past 12 months, about how many drinks would you have on a day when you drank?

[aalcnum]

(A drink is defined as one beer, a glass of wine, or a shot of hard liquor.)

- ☐ Didn't drink last year
- ☐ 1 or 2 drinks
- ☐ 3 or 4 drinks
- ☐ 5–8 drinks
- ☐ 9 or more drinks

23. During your lifetime, have you smoked at least 100 cigarettes?

[asmok100]

- ☐ No [GO TO QUESTION 27]
- ☐ Yes

24. Do you smoke cigarettes now?

[asmoknow]

- ☐ No
- ☐ Yes

25. On the average, how much do you or did you smoke each day? (1 pack = 20 cigarettes)

[asmokpdy]

- ☐ 10 cigarettes or less
- ☐ 11–20 cigarettes
- ☐ 21–40 cigarettes
- ☐ More than 40 cigarettes

26. What is the total number of years you smoked cigarettes?(Remember to leave out years you did not smoke.) [asmokyrs]

Years

--	--

- | | |
|-----|-----|
| (0) | (0) |
| (1) | (1) |
| (2) | (2) |
| (3) | (3) |
| (4) | (4) |
| (5) | (5) |
| (6) | (6) |
| (7) | (7) |
| (8) | (8) |
| (9) | (9) |

Write the numbers in
» the boxes.

Then fill in the
» matching ovals below
each box.

27. Which of the following tobacco products have you used on a regular basis for six months or longer? (Mark all the tobacco products that you used.)

- ☐ Pipe [atobaco1]
☐ Cigars [atobaco2]
☐ Cigarillos [atobaco3]
☐ Chewing tobacco [atobaco4]
☐ Snuff [atobaco5]
☐ Never used any of these tobacco products for six months or longer [atobaco6]

IV. Health Information

28. Has a doctor ever told you that you had any of the following diseases? (Mark No or Yes for each item.)

Disease		No	Yes
a. Asthma	[a_medcond5]	<input type="radio"/>	<input type="radio"/>
b. Tuberculosis	[a_medcond56]	<input type="radio"/>	<input type="radio"/>
c. Other chronic lung disease (chronic bronchitis, emphysema)	[a_medcond10]	<input type="radio"/>	<input type="radio"/>
d. Pneumonia	[a_medcond46]	<input type="radio"/>	<input type="radio"/>
e. Melanoma of skin	[a_medcond36]	<input type="radio"/>	<input type="radio"/>
f. Other skin cancer	[a_medcond43]	<input type="radio"/>	<input type="radio"/>
g. Leukemia (blood cancer)	[a_medcond34]	<input type="radio"/>	<input type="radio"/>
h. Hodgkin's disease (lymph cancer)	[a_medcond27]	<input type="radio"/>	<input type="radio"/>
i. Non-Hodgkin's lymphoma (lymph cancer)	[a_medcond41]	<input type="radio"/>	<input type="radio"/>
j. Other cancer	[a_medcond42]	<input type="radio"/>	<input type="radio"/>
k. Heart disease	[a_medcond25]	<input type="radio"/>	<input type="radio"/>
l. Diabetes (not counting during pregnancy only)	[a_medcond16e]	<input type="radio"/>	<input type="radio"/>
m. Parkinson's disease	[a_medcond44e]	<input type="radio"/>	<input type="radio"/>
n. Kidney disease (not counting kidney stones)	[a_medcond29]	<input type="radio"/>	<input type="radio"/>
o. Nervous disorder	[a_medcond40]	<input type="radio"/>	<input type="radio"/>
p. Depression	[a_medcond12]	<input type="radio"/>	<input type="radio"/>

- 29. Have your parents, brothers, sisters or children related to you by blood ever had any of the following?**
(Mark No or Yes for each item.)

Disease		No	Yes
a. Lung cancer	[ardis1]	<input type="radio"/>	<input type="radio"/>
b. Colon or colorectal cancer (bowel or rectal cancer)	[ardis2]	<input type="radio"/>	<input type="radio"/>
c. Breast cancer	[ardis3]	<input type="radio"/>	<input type="radio"/>
d. Melanoma of skin	[ardis4]	<input type="radio"/>	<input type="radio"/>
e. Other skin cancer	[ardis5]	<input type="radio"/>	<input type="radio"/>
f. Stomach cancer	[ardis6]	<input type="radio"/>	<input type="radio"/>
g. Leukemia (blood cancer)	[ardis7]	<input type="radio"/>	<input type="radio"/>
h. Brain cancer	[ardis8]	<input type="radio"/>	<input type="radio"/>
i. Prostate cancer	[ardis9]	<input type="radio"/>	<input type="radio"/>
j. Lymphoma (Hodgkin's disease or non-Hodgkin's lymphoma)	[ardis10]	<input type="radio"/>	<input type="radio"/>
k. Other cancer	[ardis11]	<input type="radio"/>	<input type="radio"/>
l. Kidney failure (uremia, Bright's disease or dialysis)	[ardis12]	<input type="radio"/>	<input type="radio"/>
m. Diabetes (sugar)	[ardis13]	<input type="radio"/>	<input type="radio"/>
n. Heart attack before age 50	[ardis14]	<input type="radio"/>	<input type="radio"/>

V. General Farming Information

- 30. Do you own or work on a farm?**

[aownfrm]

☐ No [GO TO QUESTION 36] ☐ Yes

- 31. What are the major income producing crops and animals you are currently raising on a farm?**

(Mark all that apply.)

- | | | | |
|--|---|--|---|
| <input type="radio"/> Don't work on a farm [acrpan1] | <input type="radio"/> Apples [acrpan10] | <input type="radio"/> Cucumbers [acrpan20] | <input type="radio"/> Soybeans [acrpan30] |
| <input type="radio"/> No crops or animals [acrpan2] | <input type="radio"/> Alfalfa [acrpan11] | <input type="radio"/> Grapes [acrpan21] | <input type="radio"/> Strawberries [acrpan31] |
| <input type="radio"/> Beef cattle [acrpan3] | <input type="radio"/> Blueberries [acrpan12] | <input type="radio"/> Green peppers [acrpan22] | <input type="radio"/> Sweet potat. [acrpan32] |
| <input type="radio"/> Dairy cattle [acrpan4] | <input type="radio"/> Cabbage [acrpan13] | <input type="radio"/> Hay [acrpan23] | <input type="radio"/> Tomatoes [acrpan33] |
| <input type="radio"/> Hogs/swine [acrpan5] | <input type="radio"/> Christmas trees [acrpan14] | <input type="radio"/> Oats [acrpan24] | <input type="radio"/> Tobacco [acrpan34] |
| <input type="radio"/> Poultry [acrpan6] | <input type="radio"/> Corn, popcorn [acrpan15] | <input type="radio"/> Peaches [acrpan25] | <input type="radio"/> Watermelon [acrpan35] |
| <input type="radio"/> Sheep [acrpan7] | <input type="radio"/> Corn, field corn [acrpan16] | <input type="radio"/> Peanuts [acrpan26] | <input type="radio"/> Wheat [acrpan36] |
| <input type="radio"/> Eggs [acrpan8] | <input type="radio"/> Corn, seed corn [acrpan17] | <input type="radio"/> Potatoes [acrpan27] | <input type="radio"/> Other fruit [acrpan37] |
| <input type="radio"/> Other farm animals [acrpan9] | <input type="radio"/> Corn, sweet corn [acrpan18] | <input type="radio"/> Snapbeans [acrpan28] | <input type="radio"/> Othr vegtbls [acrpan38] |
| | <input type="radio"/> Cotton [acrpan19] | <input type="radio"/> Sorghum [acrpan29] | <input type="radio"/> Othr sm grains [acrpan39] |

32. **Last year, how many acres were planted on the farm(s) where you worked (whether or not you owned the farm)?** [aacres]
- ☐ Didn't work on a farm
 - ☐ None
 - ☐ Less than 5 acres
 - ☐ 5–49 acres
 - ☐ 50–199 acres
 - ☐ 200–499 acres
 - ☐ 500–999 acres
 - ☐ More than 1,000 acres
33. **Last year, how many poultry were there on the farm(s)?** *(Report the most poultry you had last year at any one time.)* [apoultry]
- ☐ Didn't work on a farm
 - ☐ None
 - ☐ Less than 50
 - ☐ 50–99
 - ☐ 100–499
 - ☐ 500–999
 - ☐ 1,000–10,000
 - ☐ More than 10,000
34. **Last year, how many livestock (other than poultry) were there on the farm(s)?** *(Report the most livestock you had last year at any one time.)* [alivestk]
- ☐ Didn't work on a farm
 - ☐ None
 - ☐ Less than 50
 - ☐ 50–99
 - ☐ 100–499
 - ☐ 500–999
 - ☐ 1,000 or more
35. **Have you ever used growth hormones for livestock or poultry?** [aharmone]
- ☐ No
 - ☐ Yes

Please continue with page 21

For confidentiality, this page will be stored separately from your responses to this survey.

36. What certification/license are you applying for? (Mark all that apply.)

- ☐ Private applicator license/certification (for example, farmers)
☐ Certified public applicator/operator (for employees of federal, state, or local governments)
☐ Commercial pesticide license (Please provide name of your company and the city where it is located below.)

DO NOT WRITE OUTSIDE BOX

37. What is your sex?

- ☐ Male ☐ Female

[agender]

38. What is your current marital status?

- ☐ Married or living as married
☐ Divorced or separated
☐ Widowed
☐ Never married

[amarital]

39. Please write your name, current address, telephone number and Social Security Number in the space below. The primary use of Social Security Number information is for researchers to locate you in the future if they are unable to locate you at your home address, and to search health and vital records in follow-up studies in the future. Furnishing your Social Security Number is voluntary and you will not be denied any Federal right, benefit, or privilege by your refusal to disclose it.

Last Name

First Name

☐ Jr
☐ Sr

MI

Street/Route Box

City

State

ZIP

——

Area Code

Telephone

County

——

Social Security Number (if you know it)

**Current Pesticide License/
Certification Number**

**-OR- Mark X here if
this is a new application**

Please continue with page 22.

[illegible]

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--	--

[illegible]

Don't be concerned if you don't know the following information.

--	--	--	--

Year

--	--	--	--

41. Had you heard about this study before filling out this form?

☐ No **[GO TO QUESTION 43]** ☐ Yes

42. IF YES, how did you find out about the study? *(Mark all that apply.)*

- ☐ Newspaper
- ☐ Radio
- ☐ Television
- ☐ Friend or relative
- ☐ Extension service
- ☐ Trade magazine or newsletter
- ☐ Public exhibits
- ☐ Meeting presentations

43. Do you have any additional comments?

☐ No ☐ Yes (*Please use space below to explain.*)

Additional Comments:

[illegible]

Thank You For Taking The Time To Complete This Questionnaire.

PLEASE TURN IN THIS FORM TO THE STUDY REPRESENTATIVE BEFORE LEAVING TODAY.