



## Welcome to the Agricultural Health Study

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Recherche :

Un projet de recherche important a appelé l'**étude agricole de santé** est maintenant en cours. Plus de 89.000 individus participent au projet. Ceci inclut les applicateurs privés et commerciaux de pesticide aussi bien que les conjoints de ces applicateurs. Leur coopération est beaucoup appréciée et est essentielle au succès de l'étude. L'étude est commanditée par les [instituts nationaux de la santé](#) (spécifiquement l'[Institut National contre le Cancer](#) et l'[institut national des sciences de santé environnementale](#)) et l'[Agence pour la Protection de l'Environnement](#) et est effectuée par les efforts des collaborateurs à l'université des centres de l'Iowa et de Battelle pour la recherche et l'évaluation de santé publique. Les buts sont d'étudier les effets des facteurs environnementaux, professionnels, diététiques, et génétiques sur la santé de la population agricole. Cette étude fournira les informations que les ouvriers agricoles peuvent employer en prenant des décisions au sujet de leur santé et de la santé de leurs familles. Pour de plus amples informations au sujet de l'étude, y compris la conception d'étude, le nombre de participants, nombres d'événements de cancer et de mortalité observés, domaines de recherche, résultats importants, et publications, voient les liens suivants :

- ▶ [Document d'orientation](#)
- ▶ [Fond d'étude](#)
- ▶ [Questions fréquemment posées](#)
- ▶ [Résultats importants de l'étude](#)
- ▶ [Publications](#)
- ▶ [D'autres ressources \(Internet, téléphone\) pour l'information de santé d'AG](#)
- ▶ [L'information pour les collaborateurs scientifiques](#)

Dernier mis à jour : Août 2011.

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Search: 

An important research project called the **Agricultural Health Study** is now underway. Over 89,000 individuals are participating in the project. This includes private and commercial pesticide applicators as well as the spouses of these applicators. Their cooperation is much appreciated and is essential to the success of the study. The study is sponsored by the [National Institutes of Health](#) (specifically the [National Cancer Institute](#) and the [National Institute of Environmental Health Sciences](#)) and the [Environmental Protection Agency](#) and is being carried out through the efforts of collaborators at the University of Iowa and Battelle Centers for Public Health Research and Evaluation. The goals are to investigate the effects of environmental, occupational, dietary, and genetic factors on the health of the agricultural population. This study will provide information that agricultural workers can use in making decisions about their health and the health of their families. For further information about the study, including study design, number of participants, numbers of cancer and mortality events observed, research topics, important findings, and publications, see the following links:

- ▶ [Orientation Document](#)
- ▶ [Study Background](#)
- ▶ [Frequently Asked Questions](#)
- ▶ [Important Findings from the Study](#)
- ▶ [Publications](#)
- ▶ [Other resources \(internet, telephone\) for ag health information](#)
- ▶ [Information for Scientific Collaborators](#)

Last updated: August, 2011.

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Information for Scientific Collaborators

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- ▶ [Full Text of Questionnaires](#)
- ▶ [Phase 1 User Manual](#)
- ▶ [Phase 2 User Manual](#)
- ▶ [Phase 3 User Manual](#)
- ▶ [General File User Manual](#)
- ▶ [Resolved Reproductive Variables User Manual](#)
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Cancer incidence and mortality data on the cohort are being obtained from cancer registries within Iowa and North Carolina and state vital statistics offices on a yearly basis. In addition, mortality data on the cohort is being obtained every other year from the National Death Index (NDI). Cancer incidence in the cohort is presented in Table 2 and mortality in the cohort is presented in Tables 3.

Table 2a: Post-enrollment (Incident only) Malignant Cancer Cases by Site and Phase II Data Collection progress <sup>1,2,3</sup>

Incident Cases Only					
Cancer Site	Total with Cancer	Completed Phase II	Completed Phase III	Returned Buccal Sample	Returned DHQ
Bladder	339	233	156	158	152
Brain	105	51	18	35	36
Breast	1,025	795	636	540	556
Bronchus and Lung	800	419	146	244	235
Colon	688	453	274	287	282
Head and Neck	73	39	25	24	19
Kidney and Renal Pelvis	276	166	112	115	110
Leukemia	245	147	79	105	85
Liver and Intrahepatic Bile Ducts	66	32	9	11	16
Melanoma	380	276	185	168	173
Mesothelioma	22	7	4	4	3
Multiple Myeloma	124	79	29	55	57
NHL	388	247	173	218	160
Oral	157	116	75	77	78
Ovary	91	66	39	37	39
Pancreas	162	88	26	37	46
Prostate	2,271	1,599	1,226	1,438	999
Rectum and Rectosigmoid Junction	269	171	114	103	106
Stomach	106	67	37	48	45
Thyroid Gland	133	90	67	57	58
Uterine	219	161	136	93	108
Other	642	389	208	234	235
<b>Total</b>	<b>8,581</b>	<b>5,691</b>	<b>3,774</b>	<b>4,088</b>	<b>3,598</b>

Per 81000 individuals ?

Table 2b: Pre- and Post-enrollment (Prevalent and Incident) Malignant Cancer Cases by Site and Phase II Data Collection progress <sup>1,2,3</sup>

10.211% ?

## Prevalent Plus Incident Cases

Cancer Site	Total with Cancer	Completed Phase II	Completed Phase III	Returned Buccal Sample	Returned DHQ
Bladder	420	280	186	188	179
Brain	124	63	24	42	43
Breast	1,480	1,139	879	773	807
Bronchus and Lung	849	441	159	257	249
Colon	832	538	336	351	339
Head and Neck	91	49	32	31	26
Kidney and Renal Pelvis	315	190	131	131	123
Leukemia	300	181	97	126	109
Liver and Intrahepatic Bile Ducts	68	33	10	12	17
Melanoma	507	367	253	223	234
Mesothelioma	22	7	4	4	3
Multiple Myeloma	135	83	31	59	60
NHL	491	306	204	258	206
Oral	213	153	95	102	105
Ovary	141	103	61	65	65
Pancreas	173	91	26	37	47
Prostate	2,699	1,871	1,380	1,605	1,195
Rectum and Rectosigmoid Junction	354	223	152	143	144
Stomach	113	69	38	49	46
Thyroid Gland	229	167	132	109	110
Uterine	311	229	192	132	156
Other	818	505	290	303	308
All	10,685	7,088	4,712	5,000	4,571

<sup>1</sup> Cancer counts are based on nearly complete registry data through 2008.

<sup>2</sup> Subjects previously diagnosed with cancer at a different site are included.

<sup>3</sup> Buccal cell receipts represent progress through 2010.

<sup>4</sup> The 'Other' category includes in-situ bladder cancers.

<sup>5</sup> SEER Site Recode ICD-O-3 (1/27/2003) Definition used for classifying cancers.

**Table 3: Cause Specific Mortality of AHS Cohort, 1994-2009**

Cause	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Accidents	487	6.21	487	6.21
Cancer	2886	36.81	3373	43.02
Cerebrovascular Disease	421	5.37	3794	48.39
Diabetes Mellitus	163	2.08	3957	50.47
Heart Disease	2143	27.33	6100	77.80
Respiratory Disease	553	7.05	6653	84.85
Other	1188	15.15	7841	100.00

**Table 4: Medical Conditions asked about in Phase II <sup>1</sup> (fully expanded accessible table)**

	Private Applicators	Spouses	Commercial Applicators	Total
Number in Cohort:	N=52,394	N=32,345	N=4,916	N=89,655
Category	Count	Count	Count	
Completed Phase II Questionnaire	33,457	23,796	2,885	60,138
<input type="checkbox"/> Cardiovascular Disease				
<input type="checkbox"/> Endocrine Disorder				

• <b>Women's Health Disorder</b>
• <b>Autoimmune/Musculoskeletal Disorders</b>
• <b>Kidney Disorder</b>
• <b>Digestive Disorder</b>
• <b>Skin Disorder</b>
• <b>Optical or Hearing Disorder</b>
• <b>Injury</b>
• <b>Neurologic Disorder</b>

<sup>1</sup> Numbers represent medical conditions reported during Phase II interviews. Because the asking of some questions was dependent on responses to earlier questions, the counts in this table reflect the numbers of each condition reported but not the total occurrence of the diseases in the cohort.

<sup>2</sup> These conditions marked with N/A were not asked about in the men's health questions. Since 96 percent of private applicators and commercial applicators in the cohort are men, it would be misleading to report counts for these conditions in the private applicator column.

<sup>3</sup> Hearing problems were not asked about in the women's health questions. Since 99.5 percent of spouses in the cohort are women, it would be misleading to report hearing problem counts in the spouse column.

<sup>4</sup> These conditions occur in commercial applicators in insufficient numbers to be reported at this time.

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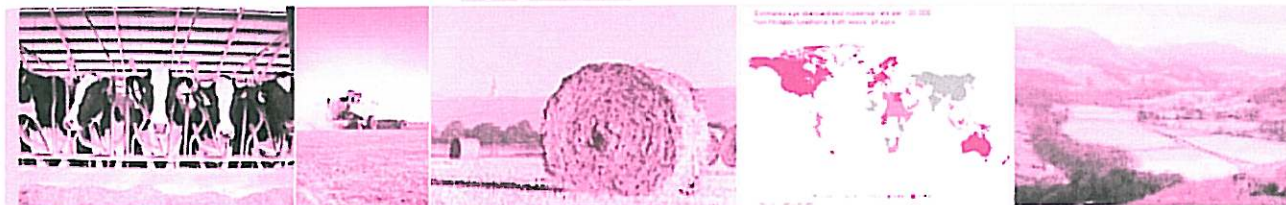


International Agency for Research on Cancer



# AGRICOH: A Consortium of Agricultural Cohort Studies

<http://agricoh.iarc.fr>



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AGRICOH is an international consortium of agricultural cohort studies formed in October of 2010 to encourage and support data pooling to study disease-exposure associations that individual cohorts do not have sufficient statistical power to study. The consortium includes three general population cohorts with a significant proportion of farmers.

AGRICOH represents a formidable vehicle for studying cancer, respiratory, neurologic, and auto-immune diseases, reproductive and allergic disorders, injuries and mortality in association with a wide array of exposures in participating cohort studies and also in under-studied settings. To this end the consortium will strive to identify new participating agricultural cohorts in medium- and low-income countries.

AGRICOH is open to researchers interested in investigating health outcomes (e.g. cancer, respiratory illnesses, many others) in association with exposures present during farming and in the agricultural environment. Complete procedures describing decision-making on the pooling of data in support of proposed projects are being developed and will be posted on this website in the near future.

**AGRICOH News**

**Upcoming Meeting**

**AGRICOH annual meeting**

12-13 September 2011  
 Centre for Research in Environmental Epidemiology (CREAL)  
 Parc de Recerca Biomèdica de Barcelona (despatx 178)  
 Doctor Aiguader, 88 | 08003 Barcelona  
 Website: <http://www.creal.cat/en/index.html>

Pourrons-nous obtenir ?  
 Des infos après colloque ?

Cohort Study (alphabetically by continent and country within continent)	Country	Years of Recruitment	Age at Enrollment	POPULATION				
				Adults	Men	Women	Children	Targeted
Pesticide exposure in emerging farmers	South Africa	2008-2009	Adults	270	180	90		
Occupational Health Needs of Women Working on Small-scale and Emerging Farms	South Africa	2006-2007	Pre-natal			911		
Ontario Health Study*	Canada	2009-2012	Adults*	8,200				150,000
New Grain Workers' Study	Canada	1980-1981	Adults		335			
Grain dust medical surveillance programme	Canada	1978-1993	Adults		20,831			
Cancer in workers in banana plantations	Costa Rica	1981-1992	Adults	34,457	29,565	4,892		
Infants and Environmental Health	Costa Rica	2010-2011	Pre-natal			350	350	450 mother- Infant pairs
Farmers Health Study	USA, California	1993-2004	Adults	1,947	1,751	196		