

West Elgin Farm Family Information Project Survey Final Report

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**West Elgin
Community
Health Centre**

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Executive Summary

The U.S. National Safety Council's annual survey of agriculture shows agriculture to be among their nation's most hazardous occupations. The data indicates that agricultural workers and their families experience a disproportionate share of disease and injury associated with the biological, physical, ergonomic and psychological hazards of agriculture.

We can make the assumption that the same is true in Canada. Although much work has been done to reduce the number of agricultural injuries in Canada, agricultural illness has not received enough attention and research in this area is lacking.

The West Elgin Community Health Centre is a nonprofit, community based organization that provides primary health care, health promotion and community development services using multidisciplinary teams of health providers. The primary goal of this centre is to raise awareness of the broader determinants of health such as employment, education, environment, isolation and poverty. The health and well being of our residents and communities is a priority for the WECHC.

Employment is a recognized determinant of health and unsafe working conditions and exposures are associated with adverse health outcomes. The West Elgin Community Health Centre conducted this study in order to examine the level of agricultural occupational illness present in local area farm owners/operators as well as the potential for illness due to exposure to hazards on the farm. By understanding clearly the risk of agricultural illness among our farmers, the Centre will be positively positioned to provide programs and services to assist them in improving their health.

The study focused on specific symptoms of prominence such as skin conditions, respiratory, and musculoskeletal conditions. It also acted as an agricultural occupational health-screening tool, by taking a look at farmer's exposure to some of the more common health hazards on the farm. Additionally, the study reviewed the use of personal protective equipment.

Five hundred and eighty one interviews were conducted with Western Elgin farm owners and operators who live or work on the farm.

The most common symptom reported by farmers was back and joint pain. Almost half of farmers (49%) have experienced persistent or recurrent back or joint pain within the past 12 months. Fifty-seven percent attributed their symptoms to work done on the farm.

We know that grain dust (i.e. corn and wheat) and animal matter (i.e. cow dander and urine) are known sensitizing agents on the farm. We also know that occupational asthma occurs after a significant period (18 months to five years) of symptomless exposure to these agents. Out of the three hundred and forty farms surveyed in the Western Elgin area, crop production and livestock production accounted for the majority of operations.

The majority of crop operations produce beans, corn and wheat. The majority of livestock operations involve cattle production. Therefore, we can conclude that many farmers experience high exposure levels to grain dust and animal matter. Also, survey results show us that exposure to dust and/or fibres is high amongst our farmers, with almost 75% of respondents indicating that they experience regular exposure to these agents. However, only 26% of the farmers are wearing a cartridge respirator when required. These exposures may be having an effect on our farmers as data indicates that 16% of respondents usually cough on most days during the year and 13% experience difficulty with breathing or shortness of breath.

A recent study in the American Journal of Industrial Medicine indicates that hearing loss acts as a risk for agricultural injuries. Prevention of hearing loss and noise exposure may be important in reducing the burden of agricultural injuries. (Choi S. -W.; et al). Sixty-Six percent of farmers indicated that they are exposed to loud noise on a regular basis. They reported wearing hearing protection 53% of the time when required. Almost half of the farmers indicated that they have had training/education in preventing hearing loss with 84% of them reporting that it was self-taught.

When asked if during the past 12 months they had dermatitis, eczema, or any other red, inflamed skin rash, 12% of farmers indicated that they had. Farmers seem to take many precautions to protect their skin from exposure. More than 77 % wear coveralls and 91% wear gloves when required.

Farmers devote a lot of time to their work on the farm. More than 6 out of 10 farmers (65%) work over 20 hours per week on the farm with the majority working more than 40 hours per week (40%). Many of these farmers (46%) are employed off the farm for 50% or more of their time.

Over 87% of farmers see stress as a concern in agriculture. Reasons for stress were attributed to mostly finances, weather, prices and workload. Almost 62% of farmers indicated that they have been exposed to psychological stress for most days of the week for many weeks at a time.

In conclusion, there appears to be a correlation between the farmer's exposure to common health hazards on the farm and the health symptoms they are experiencing. It is evident that education and health promotion programs based on reducing the risk of agricultural illness and disease are necessary in the Western Elgin area. Farming is such a valuable component of the community and protecting this asset is important.

See appendix A for more detailed survey results.

Choi S. -W.; et al (2005). Hearing Loss as a risk factor for agricultural injuries. *American Journal of Industrial Medicine* Volume 48, Issue 4, pages 293-301.

Acknowledgements

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In addition, the field interviewers, Eugene Swain and Shaun Carroll, deserve thanks and appreciation for administering the survey. The author also wishes to recognize Jessica McKillen a student hired by the Centre for the summer, who completed the majority of data entry and assisted with the set up of the project.

Introduction

The overall purpose of the study was to identify early indicators of occupational illness and disease in order to provide early intervention, education and health promotion through West Elgin Community Health Centre programming. As a community health centre our mandate is to provide health care and health promotion to our priority population, which are rural families in Western Elgin.

This project studied Western Elgin (Appendix B - Map) Farm owners and operators who live or work on the farm. The study focused on specific symptoms of prominence such as skin conditions, respiratory, and musculoskeletal conditions. It also acted as an agricultural occupational health-screening tool, by taking a look at farmers' exposures to some of the more common health hazards on the farm. Additionally, the study reviewed the use of personal protective equipment.

Background

Western Elgin is a rural area with a population of 9160 (2001 Stats Canada). It encompasses the Municipalities of West Elgin and Dutton/Dunwich. There are a total number of 685 farm operators (Stats Canada 2001 Agriculture Community Profile) living in Western Elgin. The West Elgin Community Health Centre is mandated to serve specific populations, one being farm families. Therefore, it was decided that we would focus our study of occupational illness and disease on the agricultural sector.

Methods

Survey Design

The survey (Appendix C – West Elgin Farm Family Information Survey) was designed to collect demographic data, data on particular symptoms that could be associated with occupational illness, such as respiratory illness, skin disorders, and joint and back pain, as well as data related to agricultural exposures and personal protective equipment use. Writing, debugging and revising the survey took approximately 5 weeks.

Project and Communication Approach

The West Elgin Community Health Centre is committed to working together with individuals and families to optimize the health and well being of our residents and communities. Therefore, it was important that the farming community and the community at large support this initiative. To that end we made a commitment that all farming families within our catchment area would be contacted. The choice to participate or decline involvement would be theirs.

To ensure the success of this project we wanted input and participation from partner organizations. The project was designed to provide valuable data to each of the partners involved. Partners involved in this project include: Farm Safety Association, Municipality of West Elgin, Pioneer Hi-Bred Limited (A DuPont Company), Elgin St. Thomas Health Unit, and the Occupational Health Clinics for Ontario Workers, Inc.

We also wanted the community to know about and understand this undertaking. Therefore we placed articles in the local newspaper describing the goals of the project. We have since written updates on the progress of the survey. Communication will continue as we publish the survey results using different community venues.

Data Collection

The West Elgin Community Health Centre hired two Field Interviewers. Training was provided to ensure that the interviewers used consistent procedures when conducting the survey.

Face to face interviews were the survey method chosen. Attempts to locate each farm owner/operator were made by visiting all rural farms in the Western Elgin Area. In the event that the owner/operator was not home, the field interviewer would revisit the farm. Out of the 495 farm visits made, 19 refused to complete the survey and 136 were renting land and did not own or operate the farm.

The survey took between 5-60 minutes to administer depending on the answers provided and was fielded between the dates of July 26, 2005 and December 31, 2005.

In total, 581 interviews were conducted with Western Elgin farm owners and operators who live or work on the farm. In the case of couples operating a farm together both operators were interviewed. If one partner was unavailable for questioning the other partner could act as their proxy. This process took place in 162 interviews.

Completion of the survey was strictly voluntary.

Data processing and confidentiality of records are concerns of all surveys. All data was coded and entered using only identification numbers. Only West Elgin Community Health Centre staff collated the questionnaires and these staff members all signed confidentiality agreements. Publication of study results is statistical in nature and names and other personal identifiers have not been included in any report.

Results

Survey polled 581 farmers from across Western Elgin.

A. Description of Population Studied

Table 1. Age and Gender of Respondents

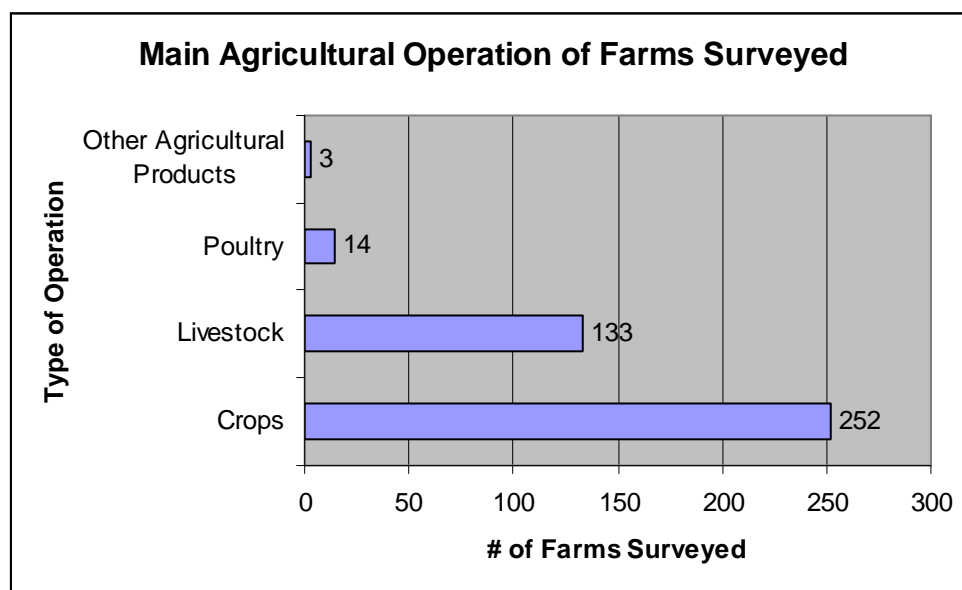
Age and Gender of Respondents	
Average Age (years)	55
Gender (% male)	54
Gender (% female)	47

Table 2. Marital Status of Respondents

Status	%
Married or Living Common Law	74
Divorced, Separated or Widowed	19
Were Never Married or Are Single	7

- 89% of respondents have children
- 70% of the respondents children currently live on a farm
- The average number of years that respondents have lived on a farm (including as a child) is 42 years
- 90% of respondents contribute to the operation of an agricultural operation
- Respondents indicated that their average time contribution to the operation of that agricultural operation is, 40% more than 40 hours per week, 25% 20-40 hours per week, 26% fewer than 20 hours per week, 9% did not respond
- 46% of respondents are employed off the farm in non-agricultural employment for 50% or more of their time during the week, of those employed off the farm the average number of years that they have been involved in non-agricultural work is 23 years

Two hundred and fifty two of the farms surveyed were involved in crop production. Although hay, tobacco, seed, vegetables, berries/grapes, and fruit/nut trees are produced in the Western Elgin area, the majority of operations produced field crops such as beans, corn and wheat. Livestock production was the next largest type of agricultural operation with the majority of operations raising cattle. (See Chart 1)

Chart 1. Main Agricultural Operation of Farms Surveyed

B. Non-Family Farm Workers

Questions were asked about non-family farm workers who do not reside on the farm full time.

- 12% of respondents indicated that they used off-farm labour in 2005

Table 3. Use of Off-Farm Labourers

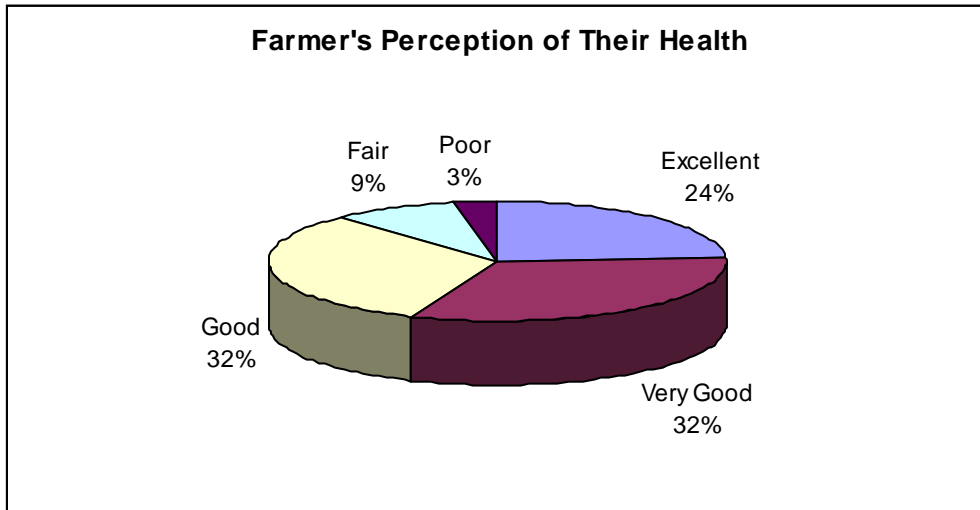
Use of Off-Farm Labourers		
Type	Average number used per Farm	Largest Number Used
Migrant	3.5	40
Domestic	5.3	38

- 60% of respondents who use off-farm labour offered some form of health and safety training for their off farm workers
- 16% of respondents indicated that they have Workplace Safety and Insurance Board coverage

C. Respondents Health

Fifty-six percent of farmers report their health as excellent or very good. (See Chart 2)

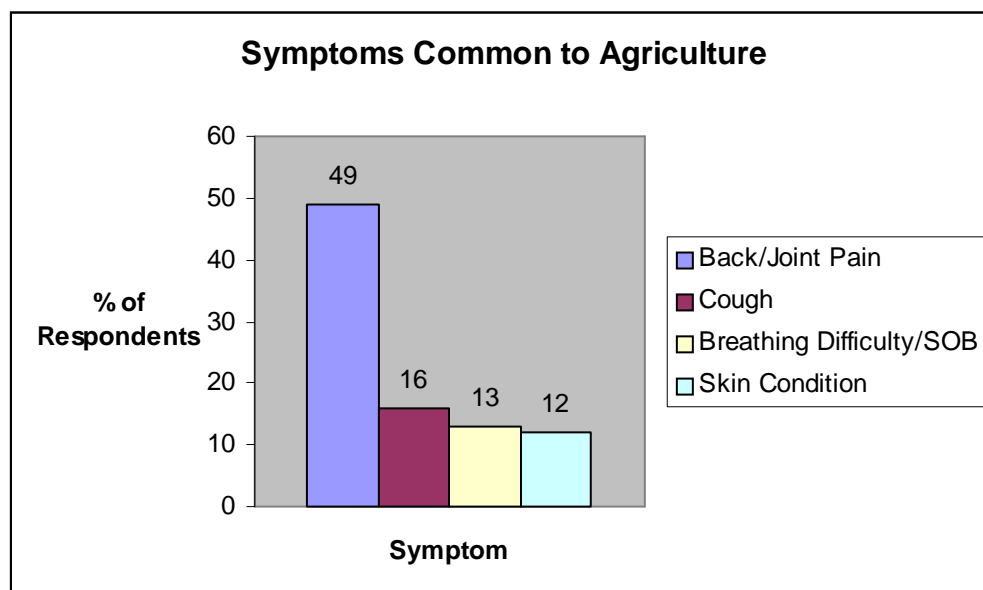
Chart 2. Farmers Perception of Their Health



- 37% felt that some aspect of their health was aggravated by the work done at their farm

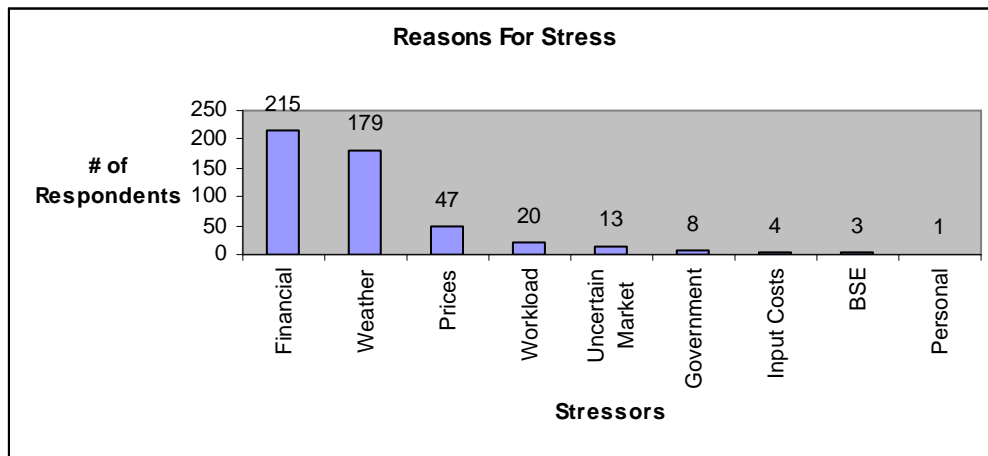
The study focused on specific symptoms of prominence such as skin conditions, respiratory, and musculoskeletal conditions. (See Chart 3)

- 49% of respondents indicated that they had persistent or recurrent back pain or joint pain in the last 12 months
- 16% of respondents indicated that they usually coughed on most days during the year
- 13% of respondents indicated that they experience difficulty with breathing or shortness of breath
- 12% of respondents indicated that in the past 12 months they had dermatitis, eczema, or any other red inflamed skin rash

Chart 3. Symptoms Common to Agriculture

- 73% of respondents saw a medical provider for one of the above symptoms
- *Respondents were most likely to see a medical provider with symptoms of persistent or recurrent back pain or joint pain (213) followed by visits for dermatitis, eczema or other inflamed skin rash (59), followed by shortness of breath (60) and then cough (55)*
- 57% of respondents felt that their symptoms were a result of work done on the farm
- *The majority felt that persistent or recurrent back pain or joint pain (149) was a result of work done on the farm, followed by shortness of breath (35), cough (35), and dermatitis, eczema or other inflamed skin rash (33)*
- 87% of respondents indicated that they saw stress as a concern in agriculture
- *Reasons for stress were broke down into categories with 215 responses for financial, 179 weather, 47 prices, 20 workload, 13 uncertain market, 8 government, 4 input costs, 3 BSE, 1 personal (see Chart 4)*

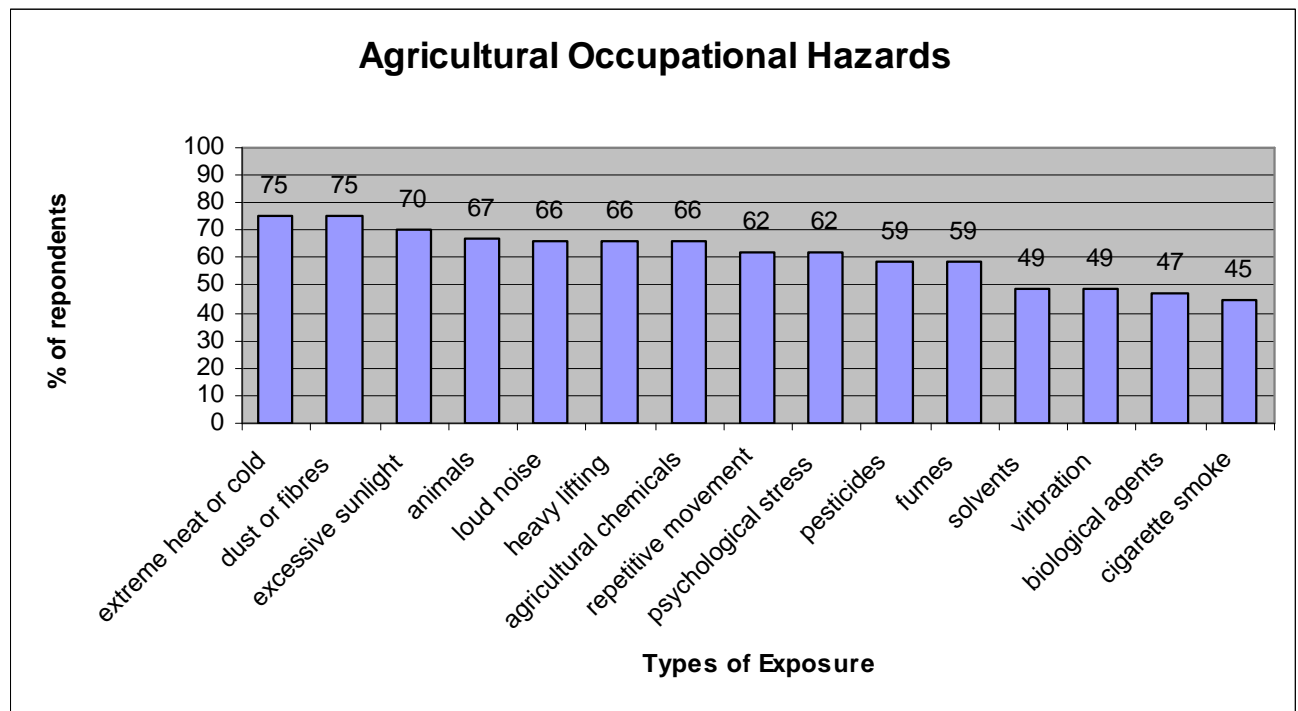
Chart 4. Reasons for Stress



Respondents were asked about their exposure to common hazards found in the agricultural industry. Levels of exposure were reported by most days of the week for many weeks at a time

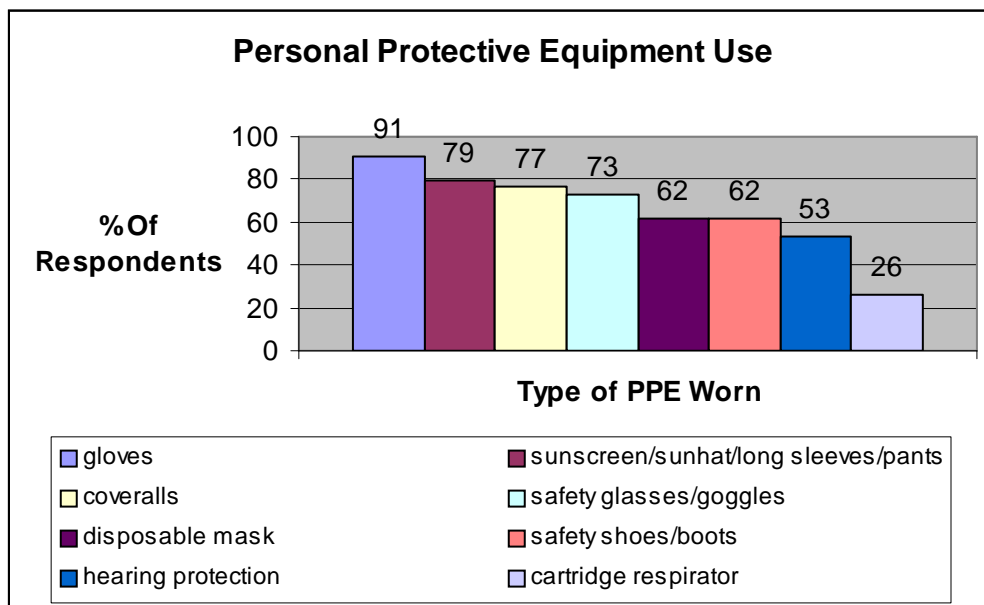
Levels of exposure to extreme heat or cold (75%) and Dust or Fibres (75%) were high. (See Chart 5)

Chart 5. Agricultural Occupational Hazards



Respondents were asked if they used personal protective equipment when required. Gloves are used when required by 91% of respondents and a cartridge respirator is used only 26% of the time when required. (See Chart 6)

Chart 6. Personal Protective Equipment Use



D. Training/Education in the prevention of farm related occupational illnesses

Respondents were asked about their past training and education experience in areas such as controlling exposure to pesticides, preventing hearing loss and respiratory diseases.

- 64% of respondents indicated that they have had training/education in controlling exposure to pesticides
- 38% of the respondents who indicated that they have had this training reported that it was self-taught
- 46% of respondents indicated that they have had training/education in preventing hearing loss
- 84% of the respondents who indicated that they have had this training reported that it was self-taught
- 44% of respondents indicated that they have had training in the prevention of respiratory diseases
- 82% of the respondents who indicated that they have had this training reported that it was self-taught

- When asked if they received other farm related occupational illness training 5% indicated that they had, with 42% indicating that they had received WHMIS training
- *When asked what training respondents would like to see offered regarding farm related occupational illness, some of the following were mentioned; chemical use training, pesticide use training, training on preventing respiratory diseases, First Aid/CPR, training to prevent hearing loss and training for youth*

E. Farm Related Injuries

Although the intention of the survey was to focus on agricultural illness and disease in the farming sector, questions were added about farm related injuries.

- 8% of respondents indicated that they had experienced a farm-related injury that required medical attention within the last 12 months

F. Training/Education in the prevention of farm related occupational injuries

Questions regarding training and education experience in areas such as equipment and machinery operation as well as electrical safety were asked.

- 46% of respondents indicated that they have had training/education in equipment operation
- 78% of the respondents who indicated that they have had this training reported that it was self-taught
- 51% of respondents indicated that they have had training/education in machinery operation
- 83% of the respondents who indicated that they have had this training reported that it was self-taught
- 42% of the respondents indicated that they have had training in electrical safety
- 83% of the respondents who indicated that they have had this training reported that it was self-taught
- 7% indicated that they have received some other form of training for farm related occupational injuries

When asked what training respondents would like to see offered regarding farm related occupational injuries, respondents indicated they would like to see Free First Aid/CPR training, and training for Youth and employees, etc.

- 48% of respondents indicated that they would like to learn more about farm safety

G. West Elgin CHC

Respondents were asked about their use of the West Elgin Community Health Centre.

- 11% of respondents see a physician or nurse practitioner at the WECHC at least one time a year
- 25% of respondents have accessed services other than medical services at the WECHC, 46% were individual, 17% were group and 36% were both

H. Access to information

Two hundred and six farmers indicated that their household accesses information on how to prevent illness and improve health from their Doctor's office. (See Table 4)

Table 4. Access to Health Information

Access to Health Information	
Types of Access	# of Respondents
Doctors, Doctor's office	206
Newspapers or magazines	153
Internet	86
Farm journals	63
Television or radio	57
Family, spouse, friends, or other farmers	37
Books	35
West Elgin Community Health Centre	28
Public health unit	9
Local farm dealers (equipment, chemicals, or seed)	3
Telehealth	1
Don't know	1
Nowhere; I don't get information	0

- When asked if respondents have access to a computer, 79% of respondents indicated that they do have access either at home or elsewhere. Out of that number, 69% indicated that they accessed the Internet at least one time a week.

Appendices

Appendix A Complete Survey results

Appendix B Map of Western Elgin Area

Appendix C Survey