



SOJNR

SOUTHERN ONLINE JOURNAL OF NURSING RESEARCH

Volume 9 – Number 3

www.snrs.org

Work of “Retired” Farmers Over Age 50

Katharine D. Winter, MPH
University of Kentucky College of Public Health

Deborah B. Reed, PhD, RN
University of Kentucky College of Nursing

Susan Westneat, MA
University of Kentucky College of Nursing

Corresponding Author:

Katharine D. Winter, MPH
University of Kentucky College of Public Health
c/o Kentucky Cancer Program
909 Kenton Station Drive, Suite C
Maysville, KY 41056
Email: twinter@kcp.uky.edu
Phone: 606-759-0300
Fax: 606-759-8412

AUTHORS' NOTE:

This paper was supported by Grant DHHS.CDC.NIOSH #1 R01 OH 004157 and the Southeast Center for Agricultural Health and Injury Prevention through NIOSH Cooperative Agreement # 5U50OH007547. The contents of this paper reflect the opinions of the authors and are not endorsed by the University of Kentucky or the funding agency. Please address correspondence to Katharine Winter, MPH, University of Kentucky College of Public Health, c/o Kentucky Cancer Program, 909 Kenton Station Drive, Suite C, Maysville, KY 41056; e-mail: twinter@kcp.uky.edu.

ABSTRACT

Objectives: The average age of the American farmer is 55.3, compared with 39 for the U.S. worker. Farming is also one of the most hazardous industries in the nation. This paper describes the work behavior of older male and female farmers claiming to be completely retired yet who continue to perform farm work.

Methods: The sample was extracted from the final wave of a 5 year panel study of farmers over age 50 who resided in Kentucky and South Carolina. Data for this analysis were collected via a single mailed survey (N=606). This report is based on 95 respondents who reported being completely retired from farming but reported performing at least one farm task in the past year. **Results:** Hours worked ranged from 0-80 in the past week ($X=4.9$ hours, S.D. 12.7) with no significant difference by gender or age. Males performed high risk activities and drove tractors more often than females. Personal satisfaction from farm work increased with age. The leading reason for work was "like to work." Three farm-related injuries were reported. **Discussion:** Farmers reporting to be completely retired from farming should not be excluded from occupational health and safety prevention-oriented interventions without first determining actual farm work practices.

Keywords: farm work; retirement; agriculture; injury

Work of "Retired" Farmers Over Age 50

Introduction

Farmers and ranchers constitute one of the most rapidly aging workforces in the United States. The average age of the U.S. workforce is 39.¹ The 2007 Census of Agriculture revealed the average age of all U.S. principal farm operators to be 55.3.² A principal farm operator is defined by the U.S. Department of Agriculture as "the person primarily responsible for the on-site, day to day operation of the farm".² Because there are no minimum hours of farm work necessary to qualify under this definition, a principal operator may be either full or part-time; farming does not have to be the primary occupation.

In order to qualify as a farm under the U. S. Census Bureau official definition, a farm operation must normally produce only \$1,000 or more of agricultural products in a year.³ Farming is not constrained by constructs typical to the labor force;⁴ there never have been a standard retirement age, performance evaluation criteria, or years of service, as has existed in various corporate and government careers. Family farms are also exempt from most regulations of the Occupational Health and Safety Act if fewer than 10 full-time nonfamily workers were employed during the previous 12 months and there was no active temporary labor camp (i.e., housing) provided during that time.⁵

The increasing age within the agricultural community is a pattern expected to continue well into the 21st century.^{6,7} In the general population retirement is

usually strongly correlated with age; however, this may not be the case within the agricultural population.

The meaning of retirement has historically been consistent with the dictionary definition: “to withdraw from one's position or occupation: conclude one's working or professional career”.⁸ Since the Social Security retirement plan was implemented, retirement has also been associated with the age of 65 when beneficiaries may become eligible to receive Social Security retirement income.⁹ However, farmers rarely completely retire from farming, an occupation acknowledged to be one of the most hazardous in the world, especially for older persons.¹⁰⁻¹² Although farm workers age 55 and over account for less than one-third (29%) of the farming workforce, the fatality rates for these older workers are more than twice that of farm workers younger than 55.¹³ When an older farmer claims to be retired, it might be assumed that the dictionary meaning applies. Yet in 2003, principal farm operators who were retired still averaged 913 hours of work on the farm per year.¹⁴

It has been noted that the trend for retirees in the 21st century has shifted from completely withdrawing from the workforce and instead, toward continuing to participate through alternate and more accommodating arrangements such as part-time, seasonal, occasional, and project work.¹⁵⁻¹⁷ This transition process from full-time work to eventual complete retirement is common enough to have been given a name and is referred to as “bridge employment”.¹⁸ In addition to those older experienced farmers engaged in bridge employment are persons who have entered farming as a second career upon retiring from a non-farming vocation. It is estimated that in the 65-and-older age group about 25,000 operators entered farming each year from 1978 to 1992.¹⁹

The aging process often includes some physiological decline such as slower reaction time, reduced physical strength, and reduced cognitive function.²⁰ These physiologic changes compound the risks of an already hazardous occupation for the older farmer. Not only do farm-related injuries occur more often among older farmers but their injuries tend to be more severe.^{13,21} Tractor related injuries are the most common cause of fatality in older farmers. Falls, being struck by swinging or handheld objects, and assaults by cattle lead the list of injury etiology among older farmers.¹³

Despite the inherent hazards, working in agriculture is an appealing lifestyle, especially for those having an affinity for the tenets of agrarianism, excerpted from the introduction to *Agrarianism in American Literature* by M. Thomas Inge²² (1969) and listed below in brief by Garkovich:²³

- “Cultivation of the soil leads to direct contact with nature and closer relationship to God.”
- “Farming is the sole occupation, which offers total independence and self-sufficiency.”

- “Farmer is given a sense of identity, of historical and religious tradition; a feeling of belonging...which is psychologically and culturally beneficial.”
- “The agricultural community, with its fellowship of labor and cooperation is the model society.”

Research has found that personal attachment to farm life is a driving force for continuing to work in agriculture, as is love of the land, and for those whose self-identity is closely tied to farm and farming, departure from farm life may be equated with separation from the very essence of their being.^{23,24} Farmers who reduce their workload during retirement and/or claim to be completely retired despite continuing to perform farm tasks may not consider what they are doing to be work. In the words of one farmer, “If you are doing it because you want to, then it’s not work”.²⁵

Of special interest to occupational aging are the farm safety and health issues that are present within the context of aging farmers doing hazardous work. It is important for policy makers, nurses and other healthcare practitioners associated with agriculture and occupational safety and health to understand that farmers who self-identify as “completely retired” may continue to undertake those farm tasks recognized to be high risk. By better understanding these circumstances, appropriate prevention-oriented interventions can be designed to assist the older farmer to safely perform farm work.

The purpose of this paper is to describe the working behavior and reasons for work of older male and female farmers who claim to be completely retired yet who continue to perform farm work, thereby also continuing to place themselves at high risk for injury.

Methods

Prior to data collection human subjects protection approval was obtained from the participating institutions of each state, the University of Kentucky and Clemson University. The data were collected by mail during Wave 5 of a longitudinal panel study of the work, health, and sociocultural characteristics in a closed cohort of family farmers residing in Kentucky and South Carolina.²⁶ In order to be eligible for the study participants had to reside on a farm in Kentucky or South Carolina, and obtain some household income from agriculture. The larger study took place over a 50 month period from 2002-2006. Wave 5 data were collected in April and May 2006 from the principal operator in each household and the results presented as cross-sectional data. The response rate was 72% (n=606).

Participants were asked to self-classify their farm work status by indicating if they considered themselves to be completely retired from farming, partially retired from farming, or not retired from farming. There were 109 farmers who reported

being completely retired. Of these, 95 also reported performing at least one farm task. This subset was used in the analysis for this report.

Farm Tasks

In order to obtain a more complete picture that covered seasonal variation in farm work, respondents were asked to indicate from a list of farm tasks what they had done in the past year. For further analysis, the tasks were grouped into four categories: animal tasks, crop tasks, management tasks and maintenance tasks. Animal tasks included: feed animals, milk animals, castrate animals, other veterinary work, herd animals, and transport animals. Crop tasks included: mow fields, till ground-plow-disc, apply pesticides- herbicides-insecticides, operate combine-corn picker, hand harvest crop, bale hay or straw, chop silage, plant crops, and transport crops. Management tasks included: pay farm bills, do farm bookkeeping, order farm supplies, run farm errands, and make major purchases of farm supplies/equipment. Maintenance tasks included: repair farm equipment/tools and repair equipment or farm structures. To determine the number of times a tractor was driven in the past year the question was asked, "Since May 2005, how many times have you driven a farm tractor?"

Hours Spent on Farm Work - Past Week

In order to examine the number of hours worked a question asked, "How many hours did you spend doing farm work last week?" In Wave 5 the planting season was beginning but not in full work mode, thus this variable may overestimate winter work and underestimate summer work. It provided a gross estimate for annual work hours per week.

Personal Satisfaction from Farm Work

Respondents were asked to rate personal satisfaction received from farm work on a four-item scale (no satisfaction/very little/some/great deal satisfaction). Because the lower two categories (no satisfaction/very little) had few responses they were combined into one for analysis, leaving a scale consisting of 0-2.

Respondents were asked, "If you still do physical farm labor, why do you continue to do it?" More than one answer could be chosen from a list of seven reasons: "Need the money," "Like to work," "Can't sit around," "Keeps me healthy," "To get out of the house," "Can't find labor," and "Just to help out." Instructions were given to circle the number one reason. An additional question asked how likely the respondent would be to stop farming completely in the next 5 years (very, somewhat, or not at all likely).

Injuries

Respondents were asked to report injuries that had occurred in the past year and indicate whether the injury resulted from farm work. An injury was defined as any injury resulting in loss of at least a half day of usual activities or for which a doctor was seen. Leading injuries sustained from farm work (lacerations that required stitches, fractures, amputations, reactions to chemicals, burns) were listed. Participants were also allowed to complete an open-ended response field to report any other injuries.

Analysis

Very little research has reported the work of female farmers and none to date has reported on the farm work of older females. Analysis was conducted by age and gender to examine differences by these variables. Descriptive statistics were used to summarize the study variables. Tests for nonparametric data were used to determine correlations and statistical significance. Chi-square tests were used to determine differences by gender among farm task categories and for differences by gender in the likelihood of stopping farming completely in 5 years. The Wilcoxon Two Sample Test was used to measure differences in number of times on a tractor by gender and number of hours worked. The Kruskal-Wallis Test was used to measure differences by gender in reported personal satisfaction from farm work. Logistic regression was used to see whether age was a predictor for farm task categories. Testing for correlations, Kendall's tau was used for likelihood of stopping farming completely and correlation with age, while the nonparametric Spearman correlation test was used to look at age and number of times on a tractor in previous year, number of hours worked during the past week, and level of personal satisfaction from farm work. Results with $p \leq 0.05$ were considered statistically significant. All data analyses were performed using SAS version 9.1.²⁷

Results

The majority of the sample were male (63.8%), Caucasian (85.3%), and married (70.5%). The average age was 71.59 (SD=7.07), with 13.7% of the sample falling in the 54-64 year age bracket, 52.6% in the 65-74 age range, and 33.7% ages 76-86. Farm size varied greatly. Acres in the total farm operation ranged from 0 to 1,100 with an average at 121 acres (SD=169). Number of years lived or worked on a farm, including childhood, ranged from 15 to 86 with an average of 55.6 years (SD=16.9). The majority (52.8%) reported a household income between \$10,000 and \$40,000 in the last year, although 32.2% reported an income above \$40,000.

Cattle and calves were raised on 48% of the farms, followed by poultry/chickens (4%), hogs/pigs (3%), horses (2%), and sheep/goats (1%). Crops grown most frequently were hay (57%), corn for grain/silage (23%), tobacco (22%), fruits/vegetables (17%), soybeans (15%), and wheat (5%).

Farm Tasks

The ten most often performed farm tasks are listed by gender in Table 1. Females tended to pay farm bills, do farm bookkeeping, and run farm errands, in that order, more than they carried out any other tasks. The top three most often performed tasks in descending order by males were operate tractor, pay farm bills, and mow fields. When the tasks were viewed by category groupings – management activities, animal activities, crop activities and maintenance activities – males were significantly more likely to report engaging in animal-related activities ($p=0.009$), crop activities ($p<0.0001$), and maintenance activities ($p<0.0001$) than females. There were no significant differences between genders in engaging in management activities. Age was not a predictor of farm tasks for any of the four work categories.

Number of times on a tractor in past year, ranged from 0 to 365 times with the average being 15.5 times ($SD=42.7$). Difference by gender in number of times driven was significant ($p<0.0001$). Males drove a tractor more often than females in the past year, averaging 25 times ($SD=53.1$) compared to female mean of 1.2 times ($SD=43.9$). The number of times on a tractor was negatively correlated with age ($p=0.05$).

Hours Spent on Farm Work-Past Week

The number of hours spent on farm work in the past week ranged from 0 to 80 hours with approximately five hours being the average number of hours spent on farm work in the past week (mean=4.9, $SD=12.7$). There was no difference by gender or age in number of hours worked; however, there was a trend toward decreasing hours as age increased.

Personal Satisfaction from Farm Work

Gender had no significant effect on personal satisfaction from farm work ($p=0.18$) although males averaged higher satisfaction scores (1.5 for males; 1.1 for females). Of the 59 participants who responded to this question, 90% found personal satisfaction in their work, with 10% claiming very little or no personal satisfaction. The level of satisfaction was positively correlated with increasing age ($p=0.04$).

Respondents could mark as many reasons as applied for continuing to do *physical* farm labor. Forty-eight percent of the participants reported never doing physical farm labor. Responses marked most frequently for performing physical farm labor included: “Can’t sit around” (30%), “Keeps me healthy” (29%), and “Like to work” (27%). The single number one reasons cited were, “Like to work” (32%), followed by “Can’t sit around” (23%), and “Just to help out” (18%).

Eighty-three percent said it was either “Very likely” (69%) or “Somewhat likely” (14%) that they would stop farming completely in the next 5 years. Slightly more than 16% reported it was “Not at all likely.” Although farmers moved toward stopping farming as they got older, the correlation was weak and not statistically significant ($p=.68$).

Injuries

Three of 15 reported injuries resulted from farm work: two cuts that required stitches, one broken bone. Farm work injuries were associated with greater average number of hours worked on the farm during the past week. The two cuts, sustained by females, one aged 68 and one 69, were associated with working an average of 24 hours in the past week. The broken bone was sustained by a 71 year old male with an average of 10 hours worked in the past week.

Discussion

The Census of Agriculture confirms that the average age of principal farm operators in Kentucky and South Carolina (55.2 and 56.9, respectively) is fairly consistent with the U.S. national average of 55.3.² However, comparison between the U.S. national average and Kentucky/South Carolina principal farm operators who report to be retired is not so straightforward or simple due to differences in how retirement may be defined and reported -- both by the researcher and by the farm operator. Reed et al. found that farmers may not consider the farm tasks they are performing to be farm work if they are doing it because they want to do it.²⁵ They have identified themselves as “completely” retired, but this definition may not be congruent with those of others, and is arguably a departure from the dictionary meaning, “to withdraw from one’s occupation: conclude one’s working career”.⁸ (Merriam-Webster Online Dictionary, 2008). Although in the larger study some of the farmers who reported to be completely retired also reported to be refraining from farm tasks, all of the farmers in this analysis described themselves as completely retired, as opposed to partially retired, yet they continued to perform farm work, including tasks with potential for serious injury.

The study has several limitations. A random sample was not used, thus data should not be interpreted as representative of all farms in Kentucky or South Carolina. The data were self-reported. Injury data were limited to recall bias and may have underestimated actual injury prevalence. Provision of a check list for only five injury categories further biased the report to only more severe injuries. The sample size precluded robust statistical analysis. As a descriptive cross-sectional study, the data do not infer causality. However, to date no literature has reported the incongruence between “retirement” and actual work practiced by self-reported retired farmers.

According to Myers et al. tractor incidents (overturns, run-overs and collisions) are the most common cause of fatal injuries while falls, being struck by swinging or handheld objects, and assaults by cattle are the most common injury events.¹³ Analysis of these Kentucky/South Carolina farmers demonstrates exposure to each of these events. Nearly one half the sample raised cattle, a leading cause of injury on farms. The ten most often performed tasks include tractor driving, doing repairs on tools and structures, feeding animals, and climbing higher than eight feet, demonstrating that these high risk activities occur regularly and offer a variety of opportunities for tractor incidents, animal assaults, falls and being struck by swinging or handheld objects.

When these activities are grouped into categories and compared by gender it becomes evident that males perform the high risk activities more often than females. Males were significantly more likely to perform more physically hazardous tasks (animal-related activities, crop activities, maintenance activities, driving a tractor), potentially placing themselves in harm's way more often. This finding was not surprising since traditionally males have tended to the more physically demanding chores of farm life, while females have tended to the daily activities of living. Women were also responsible for many of the management chores such as bookkeeping and running errands, and they assisted in the field when needed.^{28,29} However, it is important to note that the gender roles in agriculture are changing. The literature has shown that more women are entering agriculture as farm operators at a rate which is faster than that of other non-agrarian businesses and they are performing tasks traditionally considered masculine.³⁰⁻³² Pilgeram³² observed that even though women have labored on the farms in the United States, until recently they rarely had control over the land.

The finding that there was no significant difference between genders with regard to performing management activities was unexpected since the literature has shown that women are the ones traditionally performing the more clerical tasks.^{28,29} One possible explanation is that management tasks may be retained or assumed by males as their physical labor declines or their off farm jobs cease.

Twenty percent of all reported injuries occurred during farm work. The older ages of those injured within this sample supports the research by Browning et al.²¹ and Myers et al.¹³ that severe farm-related injuries are found more often in older adults. The small number of farm related injuries in this sample precludes further analysis but points to the need for exploration among larger samples of "retired" farmers. The direct relationship between hours worked and injury are congruent with the literature on the dose-effect relationship between increased hours performing farm work and increased number of injuries.^{13,21,33}

The positive correlation of personal satisfaction between performing farm work and respondent's age may be due to the assumption that those deriving pleasure from their work would likely continue their work. The top reasons for continuing to do physical farm labor were "Like to work" (number one identified reason) and

“Can’t sit around” (most frequently selected), while at the bottom of the list was “Need the money.” Clearly these retired farmers love what they do and prefer to remain active. They were not working because they had financial need or could not find laborers.

It was surprising that no difference by gender was evident for number of hours worked. This was a very different finding than that revealed in the larger study where males worked significantly more hours than females.²⁶ It could be a function of the small number of hours reported by each gender or it may be attributed to the amount of time spent on managerial duties performed by the female. There was a trend to decrease hours worked on the farm as age increased, although this was not statistically significant. This finding, together with the result that the majority reported it was likely that they would stop farming completely in the next 5 years, demonstrates that farmers both intend to and actually do reduce their workload as they age.

Implications for Nursing

It is obvious that reporting to be completely retired in farming is not necessarily synonymous with not performing farm work at all. This understanding is important in order to stimulate research to find ways to maximize the health and safety of this working group. Nurses need to be aware of the older “retired” farmers’ continued exposure to the occupational health risks of a physically intensive high risk environment. In generating an individual health profile it is not enough to ask a farmer whether he or she is retired; more specific questions need to be asked to determine actual practices. Health and safety issues pertinent to agricultural work can then be addressed. Occupational health counseling could be made available to both the farmer and the farm family, to explore ways that farm tasks might be restructured in order to decrease injury risk. Fitness-for-work evaluations such as exist for workers in other industries could be offered. This becomes critical as physical or mental health begins to show signs of deterioration.

It is apparent that with the farmers’ love of the agricultural lifestyle many farmers will continue to perform farm tasks well into advanced age. Work modifications and ergonomics to maximize safety for aging farmers are some additional possibilities for consideration. These might include equipment modifications to address range of motion, decreased muscle strength, and other chronic conditions that compromise ability to work comfortably and safely. All of these factors together can play a role in an effort to support those who continue to work on the farm despite claiming to be completely retired from farm work.

References

1. Toosi, M. (2002). A century of change: The U.S. Labor Force, 1950-2050. *Monthly Labor Reports*, 125(5), 15-28.

2. U.S. Department of Agriculture. (2008). *2007 Census of Agriculture*. Available from <http://www.agcensus.usda.gov>.
3. U.S. Census Bureau. (2008). *State and national population projections*. Retrieved May 14, 2008, from <http://www.census.gov/population/www/projections/popproj.html>.
4. Hoppe, R. A. (1996). Retired farm operators: who are they? *Rural Development Perspectives*, 11 (2), 28-35.
5. U.S. Department of Labor, Occupational Safety and Health Administration. (1998). *CPL 02-00-051-CPL 2-0.51J-Enforcement Exemptions and Limitations under the Appropriations Act*. Retrieved March 3, 2008, from http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=DIRECTIVES&p_id=1519.
6. Allen, R., & Harris, G. (2005). What we know about the demographics of U.S. farm operators [monograph on the Internet]. Retrieved May 16, 2008, from <http://www.nass.usda.gov/censu/censu02/otheranalysis/demographicpaper022505.htm>.
7. Dohm, A. (2000). Gauging the labor force effects of retiring baby boomers. *Monthly Labor Review*, 123(7), 17-25.
8. *Merriam-Webster Online Dictionary*. (2008). Retrieved July 27, 2008, from <http://www.merriam-webster.com/dictionary/retire>.
9. U.S. Social Security Administration. (2008). *Retirement planner*. Retrieved June 19, 2008, from <http://www.ssa.gov/retire2/agereduction.htm>.
10. Myers, J. (1990). National surveillance of occupational fatalities in agriculture. *American Journal of Industrial Medicine*, 18, 163-168.
11. Murphy, D. (1992). *Safety and health for production agriculture*. St. Joseph, MI: American Society of Agricultural Engineers.
12. U.S. Department of Health and Human Services. (1998). *Injuries among farm workers in the United States*. National Institute of Occupational Safety and Health Publication #98-153. Retrieved May 14, 2008, from <http://www.cdc.gov/niosh/childag/pdfs/intro.pdf>.
13. Myers, J. R., Layne, L. A., & Marsh, S. M. (2007, March). *Injuries and fatalities to U.S. farmers and farm workers 55 years and older*. Paper presented at the Conference on the Aging Farm Community: Using Current Health and Safety Status to Map Future Action, Indianapolis, IN.
14. U.S. Department of Agriculture, Economic Research Service. (2005). *Structure and finances of U.S. farms: 2005 family farm report/EIB-12* (pp.21-24). Washington DC: Hoppe, R.A. & Banker, D. E.
15. Nuttman-Shwartz, O. (2007). Is there life without work? *International Journal of Aging and Human Development*, 64(2), 129-147.
16. Purcell, P.J. (2000, October). Older workers: employment and retirement trends. *Monthly Labor Review*. 123(10), 19-30.
17. U.S. Department of Health and Human Services. (2008). *Growing older in America: the health and retirement study (HRS)*. National Institute on Aging and University of Michigan Health and Retirement Study, (pp. 40-54). Retrieved May 13, 2008, from http://hrsonline.isr.umich.edu/docs/databook/HR_Text_WEB_Ch2.

18. Ulrich, L., & Brott, P.E. (2005). Older workers and bridge employment: redefining retirement. *Journal of Employment Counseling*, 42, 159-170.
19. Gale, F. (2002). The graying farm sector: legacy of off-farm migration. *Rural America*, 17(3), 28-31.
20. Hernandez-Peck, M.C. (2001). Older farmers: Factors affecting their health and safety[monograph on the Internet]. Retrieved May 20, 2008 from <http://www.cdc.gov/NASD/docs/d001701-d001800/d001760/d001760.html>.
21. Browning, S.R., Truszczynska, H., Reed, D.B., & McKnight, R.H. (1998). Agricultural injuries among older Kentucky farmers: The Farm Family Health and Hazard Surveillance Project. *American Journal of Industrial Hygiene*, 33,341-53.
22. Inge, M. T. (1969). *Agrarianism in American Literature*. New York: Odyssey Press.
23. Garkovich, L. (n.d.). Land and how it got that way: Perspectives on how land has shaped the American character. Retrieved May 29, 2008, from <http://www.landfilm.com/perspectives.html>.
24. Reed, D. B. (2004). Understanding and meeting the needs of farmers with amputations. *Orthopaedic Nursing*, 23(6), 397-402.
25. Reed, D.B., Garkovich, L., Fields, B., & Privette, C. (2004, October). "Cutting back: Transitioning from farmer to retiree." Paper presented at the 2004 State of the Science Conference, Hershey, PA.
26. Reed, D.B. (2008). *Sustained work indicators of older farmers: Final report*. Unpublished manuscript, Lexington: University of Kentucky.
27. SAS Institute, Inc., Cary, NC.
<http://www.sas.com/technologies/analytics/statistics/stat/index.html>.
28. Reed, D.B., Browning, S.B., Westneat, S.C., & Skarke, L. (1999). The hidden work of the farm homemaker. *Journal of Agricultural Safety and Health*, 5(3), 317-327.
29. Rosenfeld, R.A. (1985). *Farm women: work, farm and family in the United States*. Chapel Hill: University of North Carolina Press.
30. McCoy, C.A., Carruth, A.K., & Reed, D.B. (2002). Women in agriculture: Risks for occupational injury within the context of gendered role. *Journal of Agricultural Safety and Health* 8 (1), 37-50.
31. Korb, P. (2004). Women farmers in transition. Structural and financial characteristics of U.S. Farms. AIB-797. Washington, DC: U.S. Department of Agriculture, Economic Research Service. PPO 63-72.
32. Pilgeram, R. (2007). "Ass-kicking" women: doing and undoing gender in a US livestock auction. *Gender, Work and Organization*, 14(6), 572-595.
33. McCurdy, S.A., Farrar, J. A., Beaumont, J.J., Samuels, S.J., Green, R.S., Scott, L.C., et al. (2004). Nonfatal occupational injury among California farm operators. *Journal of Agricultural Safety and Health*. 10(2), 103-119.

Table 1

Frequencies and rank of ten most performed farm tasks, overall and by gender. (N=95)

		Male (n=60)	Female (n=35)
Farm task	Total	Frequency/rank	Frequency/rank
Pay farm bills	74	44 (2)	30 (1)
Drive tractor*	53	47 (1)	6 (5)
Run farm errands	49	37 (3)	12 (3)
Repair farm equipment/tools*	46	40 (5)	6 (5)
Mow fields*	44	41 (4)	3 (6)
Order farm supplies	40	31 (7)	9 (4)
Do farm bookkeeping	39	24 (10)	15 (2)
Repair equipment/farm structures*	34	32 (6)	2 (7)
Feed animals*	33	27 (8)	6 (5)
Climb > 8 feet*	28	26 (9)	2 (7)

Note. More than one task could be selected; totals may add to more than 95.

*These tasks are associated with the most hazardous activities for older farmers.