

recovery from secondary injuries can be extremely slow.

Assistive Technologies (AT) are used as a bridge that can help farmers and ranchers with disabilities or injuries continue to be productive while reducing opportunities for secondary injuries (National AgrAbility). ATs primarily improve functional abilities of persons with disabilities. Both commercially and custom made devices of low or high technologies are used in reducing agricultural injuries. Selected examples of ATs commonly used in agriculture are wheel chair, mechanical lift for placing the operator on tractor seat, hand operated clutch and break system, and remote controlled gates.

VIRGINIA AGRABILITY

Virginia AgrAbility is a program supported by the US Department of Agriculture. The overall goal of the program is to improve agricultural safety and to assist farmers and farm workers with injuries and/or disabilities rejoin the work force with minimum time loss. In addition to providing safe work environment, the program develops and delivers educational programs for farm workers and their families. The program is jointly administered by Virginia Cooperative Extension and Easter Seals UCP Virginia with the support of a number of other state agencies. The state agencies participating in the program include Virginia Assistive Technology Systems, Woodrow Wilson Rehabilitation Center, Virginia Department of Rehabilitative Services, Virginia Farm Bureau, Centers of Independent Living, Virginia Rural Health Association, and the Virginia Department of Rehabilitative Services. Members of this partnership and volunteers from local agencies are responsible for delivering the needed assistance and services. This program is currently in its 16th year and is expected to continue at least for another three years.

Resources

Assistive Technologies in Agricultural. Virginia Cooperative Extension, Publication Number 442-084 (BSE-183P), Posted December 2014

Preventing Secondary Injuries in Agricultural Workplaces. Virginia Cooperative Extension, Publication Number 442-085 (BSE-150P), Posted August 2014

Arthritis and Farming. Virginia Cooperative Extension, Publication Number 442-083 (BSE-139P), Posted August 2014

Machinery Safety on the Farm. Virginia Cooperative Extension, Publication Number 442-092 (BSE-179P), Posted December 2014

Safe Operation of Compaction Tractors. Virginia Cooperative Extension, Publication Number 442-093 (BSE-148P), Posted August 2014

AgrAbility Virginia website:
<http://www.agrability.ext.vt.edu/>



The AgrAbility Virginia Project provides direct education and on-site assessment to farmers and farm workers with disabilities, as well as to their family members.

AgrAbility Virginia

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Virginia Agriculture Relating to Farmers



≡ AGRICULTURE 101 – VIRGINIA AGRICULTURE

ECONOMIC IMPORTANCE

Agriculture is by far the largest industry in the state. The economic impact of this industry is \$70 billion annually and it provides more than 334,000 jobs in the commonwealth. In addition, production agriculture and forestry supports 1.7 other jobs elsewhere in the Virginia economy.

The 44,800 farmers and workers engaged in Virginia agriculture. Agricultural and forestry exports

were valued at approximately \$2.8 billion annually. Industries active in adding value to farm commodities employ an additional 69,000



workers and generate additional \$26 billion in terms of industrial output. Industries closely associated with agriculture support 221,000 more jobs and generate nearly \$26 billion in output in the state.

VIRGINIA FARM PROFILE

There are more than 48,000 farms in Virginia. The number of farms in the state has been steadily decreasing and in five decades the number has declined over 50%. Average size of farms in the commonwealth is 181 acres and it covers approximately 8.1 million acres or about 32% of Virginia's total land area.

Unlike in many other states, ninety percent of Virginia farms are operated by individuals or families. About 17% of them are females. Approximately 25% of Virginia farms share the farm income with multiple households.

A typical Virginia farmer is 59.5 years old and this average age is steadily increasing. About 36% of the Virginia farmers now are 65 years of age or older. As a result, the age related disabilities are common among farmers in Virginia.

VIRGINIA FARM COMMODITIES

Virginia is blessed with diverse climatic and topographic conditions. There are large variations in topography and climatic conditions among the five agricultural regions in the state – Tidewater, Piedmont, Northern Virginia, Western mountain and southwestern mountain. For this reason, agriculture in the commonwealth is also very diverse.

Both animal and crop production thrive in Virginia. Major crops include soybean, corn, tobacco, tomatoes, wheat, hay and cotton. Animal products produced in Virginia include broiler chickens, milk, cattle and calves, turkey, horse and pork. In terms of cash receipts, the top five farm commodities are broilers, cattle and calves, milk, turkeys, and soybeans.

Grape production for wine has been steadily increasing in the state. The 7th ranked Virginia, in 2007, produced 5,600 tons of wine grapes and 350,000 cases of wine. Virginia is ranked 5th in the U.S. in the fast growing equine industry

AGRICULTURAL OPERATIONS

Most, if not all operations associated with crop and animal production are highly mechanized. Farmers make huge investments in machines to maintain high production efficiency. Mechanization permits management of large acreage with fewer workers. For example, it is not unusual that four or five workers manage activities on a farm as large as 3,000 acres producing variety of crops. To a large extent manpower requirements will depend on the type of operation.

AGRICULTURAL SAFETY

Agriculture is recognized as one of the most hazard-

ous occupations in the United States. While Agriculture, forestry, fishing and hunting is ranked third in terms of number of fatal occupational injuries, it tops the list in terms of fatality rates per

1,000 employees. In 2013, nearly 42,000 adults have experienced either primary or secondary injuries from agricultural related operations. This



total translates into a rate of 6 injuries per 1,000 adult farm workers (NASS, 2013). There is potential for this rate to go up in the future because the average age of farmers and ranchers continues to rise and as more farmers continue farming with existing age related or other disabilities and/or injuries. Results of a comprehensive survey conducted in Virginia revealed that primary causes of agricultural injuries are falls, heavy lifting, farm machines and power tools (Grisso et.al., 2014)

INJURIES & PREVENTION

Agriculture being a hazardous occupation, many farmers and farm workers sustain injuries from accidents. Additionally, as the average age of farmers and ranchers in the US is increasing steadily, many operate with age related disabilities or other health problems. Since farm work could not be put off, many of them continue to engage in physically demanding agricultural activities with disabilities and/or primary injuries that they are dealing with. This increases the opportunity for secondary injuries. The impact of secondary injury can be devastating to individuals involved as well as their families because