

AgGuide

AGRICULTURE NEWS & TRENDS



Trends in Equipment

While not at the level of the 2011 boom, farm equipment buying in 2013 and 2014 has chugged along at a steady rate.

The annual business outlook survey of the Association of Equipment Manufacturers showed a modest 2.8 percent increase for the 2014 buying season after a 2.8 percent boost in 2013.

According to a report by Western Farm Press, the global market for Agricultural Implements and Machinery is projected to reach \$122.9 billion by 2017. The market is set to offset sluggish progress in the developed world with growth forecast for developing economies.

Asia-Pacific represents the largest as well as the fastest growing regional market, while plowing and cultivation machinery is expected to register the fastest growth across all segments.

So what's behind the spending splurge?

Farmers are investing their increase in net incomes in the premium products they may have passed on in less profitable seasons. Even in the face of expenses in other areas, farmers are opting for GPS autoguidance packages, remote vehicle monitoring systems and heavy duty tractors equipped with tracks in place of less-expensive wheeled vehicles.

TRACTORS

Most of the spending



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activity is within the large commercial farm equipment sector. Large row-crop tractors, four-wheel-drive tractors, combines, sprayers, cotton harvesters and planters and being scooped up as farmers continue the trend of moving to bigger equipment.

The AEM reports that farm consolidation has required farmers to cover more acres in a season, which makes larger machinery a valuable piece of the productivity puzzle. Even if labor supply dips, large tractors and combines can prove critical cogs in a farmer's system.

TRENDS

Farm Equipment's 2014 Dealer Business Outlook & Trends survey shows a United States farming community leaning toward technology-guided equipment. Based on the percentage of dealers who expected unit volumes of

specific equipment to increase in 2014, farm loaders took the top spot at 94.7 percent of dealers' choice for increasing unit sales.

GPS and precision farming equipment also was in the mid-90s, while lawn and garden products, windrowers and round balers ranked highly.

New Methods in Farming

Farming for years has been undergoing a progressive evolution across planning, machinery and productivity.

Climate and market challenges have shifted farming strategies into more efficient and cost-effective models. Such trends are evident within the 2012 Census of Agriculture, which has told the story of American farming since 1840.

At the base of many new farming methodologies is technology, as pointed out by the 2012 Census:

- Farms with Internet access rose from 56.5 percent in 2007 to 69.6 percent in 2012
- 57,299 farms produced on-farm renewable energy, more than double the 23,451 in 2007
- 474,028 farms covering 173.1 million acres were farmed with conservation tillage or no-till practices.

TRENDS

Precision Planting:

Automatic row shut-off and variable-rate seeding are two of the main factors driving farmers' decisions to trade in their older, smaller planters for newer ones equipped with the latest in precision-planting technologies.

Vertical Tillage: This relatively new method of tillage is centered upon sizing and optimizing crop residue with light incorporation at high speeds.



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DIVERSITY

Non-technically speaking, one of the largest driving factors in new methodologies can be found in an analysis of the farming age shift. Young, beginning principal operators who reported their primary occupation as farming increased 11.3 percent from 36,396 to 40,499 between

2007 and 2012, according to the 2012 Census.

Principal operators were on average 58.3 years old and were predominantly male, while second operators were slightly younger and most likely to be female. Cultural diversity also is sweeping the farming industry, with all categories of minority-operated

farms increasing between 2007 and 2012. Hispanic-operated farms had a significant 21 percent increase.

SMALL ACREAGE

Approximately 294,000 U.S. farms operated on 10 or fewer acres in 2007, according to the United States Department

of Agriculture, catalyzing what is labeled by experts as the small-farming revolution.

Many of these small operations make up the approximately 144,530 farm operators who reported selling products directly to consumers. In 2012, these sales totaled more than \$1.3 billion (up 8.1 percent from 2007).

Safety in the Field

Would you guess that farming is the most hazardous industry in the nation? You would be correct, according to the National Safety Council.

Every year, thousands of farm workers are injured and hundreds more die in farming accidents – most of which involve machinery.

Other health and safety hazards on farms include chemicals, pesticides, dust, electricity, grain bins, hand tools, livestock handling, ponds, heat and toxic gases. Creating, maintaining and communicating clear policies regarding all aspects of your farming operation is a great start to ensuring farm-wide safety.

VULNERABILITY FACTORS

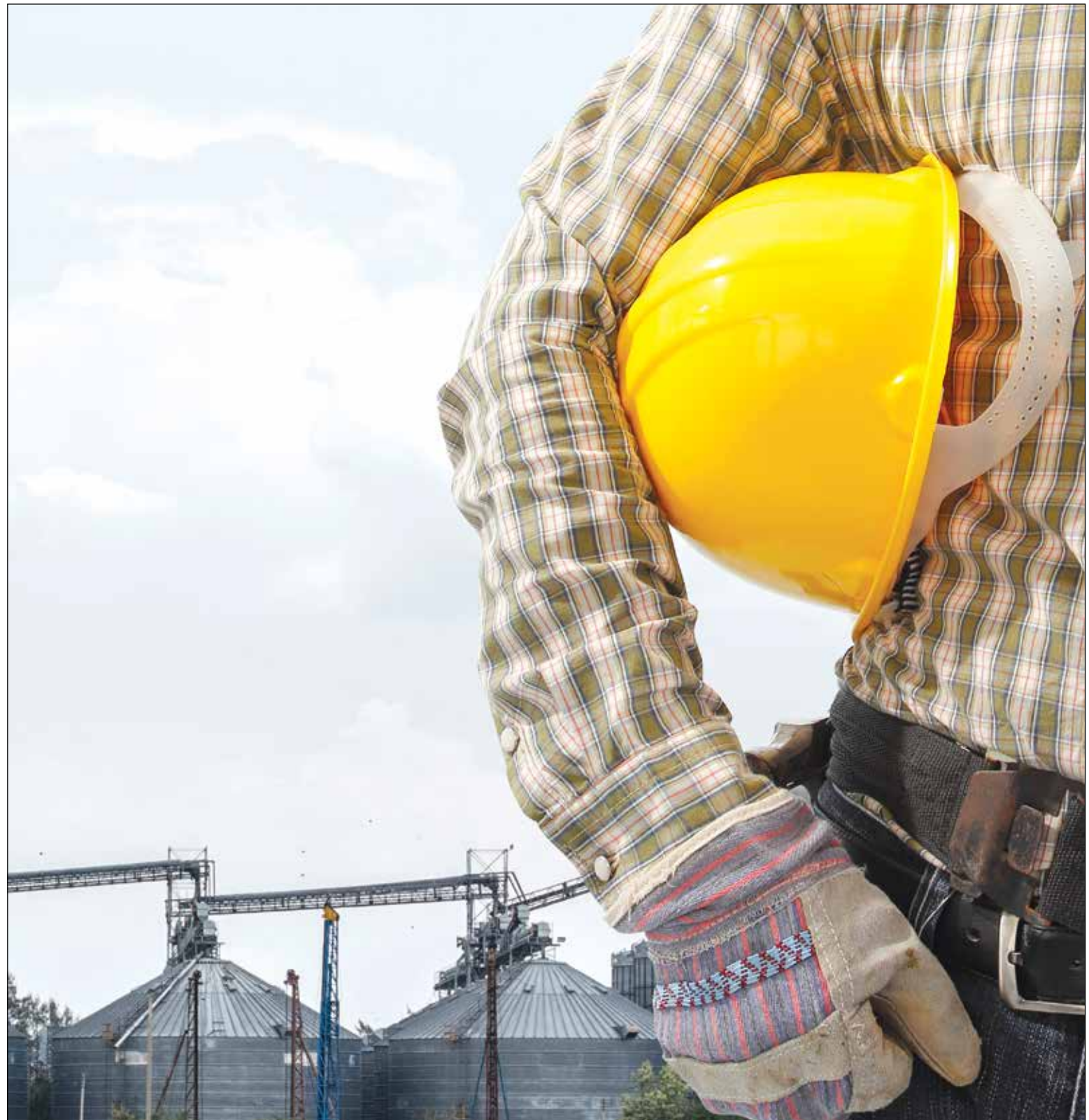
Age is the most critical factor in the occurrence of farming accidents. Hazards that may affect children and the elderly are the most important to have under control for any principal farm operator.

You can start by making a conscious effort to increase your awareness of farming hazards and prepare for emergency situations. These dangers include fires, vehicle accidents, electrical shocks from equipment and wires, and chemical exposures.

OSHA TIPS

The Occupational Safety and Health Administration offers the following tips on how you can foster a safer farm environment, which will lead to higher morale and productivity in your workforce.

- Read and follow instructions in equipment operator's manuals and on product labels;
- Inspect equipment routinely for problems that may cause accidents;
- Discuss safety hazards and emergency procedures with your workers;
- Install approved rollover protective structures, protective enclosures, or protective frames on tractors;
- Review and follow instructions in material safety data sheets and on labels that come with chemical products; and
- Be aware that methane gas, carbon dioxide, ammonia and hydrogen sulfide can form in unventilated grain silos and manure pits, causing explosions or suffocating workers.



Organic Farming

Among the key reasons consumers are buying more organic foods is the positive impact on the environment. They also may contain more anti-oxidants and fewer pesticide residues.

The British Journal of Nutrition found that organic crops contain 17 percent more anti-oxidants than non-organically grown crops, meaning more of the key agents crucial in fighting cancer and prevent heart disease are preserved.

Such reports are igniting increases in product revenues, as organic farmers reported \$3.12 billion in sales in 2012, up from \$1.7 billion in 2007, according to the 2012 Census of Agriculture released by the U.S. Department of Agriculture.

GROWING ORGANIC

For growers of organic products, it's all about the soil. Farmers build healthy soils by nourishing the living component of the soil with various natural materials. Organic matter can be built with compost and cover crops.

Weeds can be controlled without the use of harmful chemicals through various methods. The Organic Farming Research Foundation identifies these as viable options: crop rotation, mechanical tillage, hand-weeding, mulches and flame weeding.

RAISING ORGANIC

Certified organic meat, dairy products and eggs must be produced from animals that



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are fed organic feed and allowed routine access to the outdoors. Their living conditions must be up to par with specific standards that accommodate the natural behavior of the animal.

Organic livestock and poultry may not be given antibiotics, hormones or medications, unless afflicted with an illness. They may, however, be vacci-

nated against disease, which is generally controlled through preventative measures such as rotational grazing, balanced diet, sanitary living conditions and stress reduction.

FROM FARM TO TABLE

One way organic farmers have capitalized on their craft

– especially operators of smaller farms – is by monetizing their products via direct sale. Customers across America have taken notice of the organic food market as they attempt to improve the overall eating habits of themselves and their family members.

If you grow organic fruits, for example, you may consid-

er turning it into a jam, jelly, cider or butter. You may need a certified kitchen for this purpose, so check in with your local health department.

Additionally, many organic farmers also are able to offer tourist-like attractions. Some options may be a general store with crafts and goods, a petting zoo or a pumpkin patch with corn mazes.

The Future of Farming

Young farmers may wonder if it's a good time to enter the industry.

With increasing expenses and weather unpredictability, it's easy to understand their trepidation.

According to research by the United States Department of Agriculture, farmers young and old can take comfort in the fact that farm equity is projected to reach another near-record level this year and next, despite an expected slowdown in asset growth and boost in debt levels.

Below are the key pieces from the department's recent studies. The numbers show promise in various sectors of the farming industry, as well as downward trends in others.

- Net farm income was forecast to be \$113.2 billion in 2014, down 13.8 percent from 2013's forecast of \$131.3 billion.

- If realized, the 2014 forecast would be the lowest since 2010, but would still remain more than \$25 billion above the previous 10-year annual average and would rank fifth-highest since 1973.

- Total production expenses are forecast to be 4 percent higher in 2014, which would be the fifth consecutive increase

since last falling in 2009.

- Farm financial risk indicators such as the debt-to-asset ratio are expected to continue at historically low levels, indicating continued financial health for the sector.

- Livestock receipts are expected to increase by more than 15 percent in 2014, due to a 21 percent increase in dairy, a 20 percent increase in hog, and a 15 percent increase in cattle receipts.

- Corn receipts are expected to experience the largest dollar decline in 2014 receipts among farm commodity categories. While U.S. corn production is forecast to reach a record level in 2014, the annual corn price is expected to fall by 32.4 percent.

- Higher expected hay receipts reflect forecasts of higher production, drawing down of hay inventories and higher average prices.

- A decline of \$2.3 billion is forecast for receipts from fruits and nuts in 2014, reflecting expected declines in production of cranberries, grapes, peaches, pears, grapefruit, lemons, and oranges.



How to Raise Cattle

Where's the beef? It's at the top of the list. In 2012, the largest category of operations was beef cattle, with 29 percent of all farms and ranches specializing in cattle, according to the government.

If you own enough land and are interested in beginning a cattle operation, there are some factors to consider.

Land, labor, feed and management are the primary expenses for any farming entrepreneur looking to raise cattle, according to the Penn State University College of Agricultural Sciences. The type of operation you choose to oversee also is a main factor to consider, as there are major differences between breeding stock or commercial cattle for market.

Just as with founding any other business, it is critical to sit down and map out your strategy.

Put together your business plan. Consult with a lending professional to cover any financing needs. The research you put in on the front end will pay off.

TYPE OF OPERATION

Before you get started in the beef business, you will need to ask yourself what type of operation you feel comfortable managing. You probably have some general knowledge on feeder calves or feedlot operations.

If not, set up a meeting with your local agricultural extension center and ask any ques-



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tions you may have. Their advice can be crucial to setting you up on the right path.

FACILITIES & EQUIPMENT

Facilities for beef operations can vary in price and size. Your requirements will

depend on if your operation will be seasonal and what types of equipment you will need.

Penn State recommends that all operations contain some type of handling system that allows a producer to easily catch and restrain an animal for routine health care

procedures.

Smaller equipment you will need includes syringes, needs, halters and storage options.

Do you plan on growing your own feeds? Then you will need a tractor, as well as planting and harvesting equipment.

A brush hog and mower

clip are vital pieces of equipment if your operational plans include a pasture, which is made mostly of plants that stop growing once they have produced seeds for the year.

Keeping the seed heads clipped will keep them growing in a vegetative state.



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The U.S. Farm Bill

Every five or six years, farmers wait with great anticipation for a critical piece of legislation: The Agricultural Act.

Known more simply as the U.S. Farm Bill, the Act is a comprehensive statute that covers most federal government policies related to agriculture in the United States. The Farm Bill is typically renewed every five years but was two years late in 2014.

The bill is broken down into a variety of categories, including energy, commodity programs, trade, nutrition, credit, rural development, crop insurance and disaster assistance. Originally creat-

ed in 1933, it has grown to its current \$956 billion iteration.

EARLY FARM BILLS

President Franklin D. Roosevelt's 1933 Agricultural Adjustment Act provided subsidies to U.S. farmers in the midst of the Great Depression.

The federal government paid farmers to stop the production of seven main crops to reduce their supply and

increase prices.

The Agricultural Adjustment Act, which was later deemed unconstitutional by the Supreme Court, also contained several provisions related to conservation, Dust Bowl support and surplus harvest storage regulations. Its basic features were included in later Agricultural Adjustment Acts and served as guidelines for future farm bills that have been regularly passed since 1965.

2014 HIGHLIGHTS

The main provision within the 2014 farm bill replaces direct crop payments with an insurance program and trims \$8 billion from food stamps over the next decade. Now, instead of receiving a regular annual government check, farmers will pay an insurance bill every year and will only receive support from that insurance in years when they take a loss, according to the USDA.

Other key points highlight-

ed by the United States Department of Agriculture are:

- A 30 percent reduction in traditional commodities subsidies, and a 50 percent boost in funding for fruits, vegetables and organic programs;
- An increase in funding for growers making the transition from conventional to organic farming (from \$22 million to \$57.5 million); and
- Large bumps for programs that help food stamp recipients pay for fruits and vegetables.