# Agriculture Adventures for Families

### Harvest

- the process of gathering a ripe crop from a field, from the Old English word "hærf-est," meaning "autumn," "harvest time" or "August."







The combine harvester, also known as the combine, is a machine designed to efficiently harvest a variety of grain crops. The name derives from its ability to "combine" three separate harvesting operations:

Reaping – the process of cutting a crop for harvest, typically using a scythe, sickle, or reaper.

Threshing – the process of loosening the edible part of the crop from the straw to which it is attached.

Winnowing – the process by which chaff is separated from grain via blown air. Chaff is the seed coverings and other debris separated from the seed during the threshing process.

In 1835, inventor Hiram Moore of Michigan built and patented the first combine harvester that could reap, thresh, and winnow cereal grain. The first combine was 17 feet long and had a cut width of 15 feet. Operators needed 20 horses to pull the equipment through a field. Source: www.farms.com/ag-industry-news/7-agricultural-firsts/

In 1911, California led the charge of manufacturing self-propelled combines with the Holt Manufacturing Company. Prior to the combine, the typical threshing crew consisted of 20 to 30 workers, while a combine required only four

Beginning in 1915, International Harvester released its first line of tractor-pulled combines with an engine aboard that powered the threshing mechanism. J.I. Case and John Deere introduced their tractor-pulled combines in the

In 1925, Holt and Best merged to form Caterpillar and dominated the combine market. In 1936, Caterpillar sold the entire combine line to Deere and Company, to concentrate on crawler tractors.

In 1975, New Holland introduced the first commercial twin-rotor combine, which is still in use today. Source: https://ironsolutions.com/a-brief-history-of-the-combine/

New models of combines can range in price from \$400,000 to \$700,000. With the additional cost of attachments, costs can rise to more than \$1 million.



Combines are divided into classes based on their power. Classes are defined by the Association of Equipment Manufacturers. The class of combine is determined by the model's horsepower: the higher the horsepower, the higher the class number. Most new combines sold are Class 7 or larger, which is greater than 323 hp.



Barley Corn

Flax (Linseed) Oats

> Rapeseed Rice

Rye Sorghum Soybeans

Sunflowers

Wheat





Case Combine, c.a. 1900 Source: Zechariah Judy from Idaho Falls, ID J.I. Case combine and crew with 20-mule team pulling the machine, c.a. 1900



John Deere Combine Source: www.deere.com/en/harvesting/s-

Name:

Membership #:



Case IH Combine Source: www.caseih.com/northamerica/en-us/ products/harvesting/axial-flow-combines/



Source: www.assets.cnhindustrial.com/nhag/ nar/en-us/assets/pdf/combines/

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Complete and submit an entry every month all in 2022 and your name is automatically entered into an "End of Year" drawing for a gift basket full of ag themed goodies.

Good luck!

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Tracy VanUuren

## October Word Search

Horsepower **Autumn Combine Machine** Crops **Process** Cutting Reaping **Engine** Seed **Field** Threshing Grain **Tractor** Harvest Winnowing

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