sought mechanical means to do plowing and other heavy farm work. Polk county had the distinction of having one of the first inventors of the farm gas or oil burning tractors. A. O. Espe, of Crookston was the inventor of a tractor whose patent rights were purchased by the Avery Tractor company. The writer, super­intended the operation of the Espe tractor on the Northwest Station.

The use of the farm tractor marked the beginning of rapid changes which took place in farm practices which gained momentum in the early twenties and has continued up to the present time. Mechanized power on the farms during the twenties and through the depression period of the thirties, was used primarily to relieve horses of the heavy work of plowing and field preparation, following etc. Field machinery companies increased the cut of grain binders gearing them to the power take-off on tractors. Smaller threshing machines with 20 to 24 inch cylinders were built so the average sized farmer could have his own machine. The late thirties and early forties at the advent of World War II marked the introduction of the grain combine into the Red River Valley. Small 6 foot combines were made for the small farmer with ten, twelve and fourteen foot combines made for the larger farmers. The first combines were of the Pull-type with power take-offs for the smaller sizes and separate motors to run the threshing mechanisms of the larger combines. It was found in the midwest states that straight combining such as was practiced in the drier regions of the great Plains and Northwest, was not practicable in the Red River Valley, unless grain drying facilities were available, so binders were first used to run the grain in swaths and left on the stubble until the moisture content of the grain was safe for threshing and storage. The binders were replaced shortly by the cheaper and more economical swathers of sizes to fit the combine sizes. While many self-propelled combines were in use during the forties, yet they achieved their greatest perfection in construction by 1958. The self-propelled swather, has since 1952 become very popular and is supplementary equipment now on many farms of the county. The application of power to the work of the farm was contagious to other parts of the farm economy.

The extension of electric lines by the power companies in the twenties and thirties and the coming of the electric cooperatives such as the Rural Electric Administration during the forties and fifties, extended the use of mechanical power to every phase of farm life. Electricity and automotive power in the home, in the farm buildings and around the farmstead have made the hand pump and hand operated machines as obsolete as the hitching post. Power from electricity, heat and energy from gasoline and oils have elevated the standard of living of the farm family to a par with that of the city dweller.

Other marks of progress during the past fifty years will be discussed in the presentation of the crops and livestock statistics.