

duced fifteen million bales, and yet received sixty million dollars less for the 1911 crop. Society had the benefit of the four million bales of cotton, but the farmer got sixty million dollars less than nothing for them. In 1915 we produced one billion and twenty-five million bushels of wheat, and received nine hundred and forty-two million dollars for it. In 1916 we produced six hundred and forty million bushels and received one billion and twenty million dollars for it. Society had the benefit of three hundred and eighty-five million bushels of wheat in 1915, but the farmer received seventy-eight million dollars less than nothing for them. Thus it will be seen that simply to produce will not mean prosperity. Reliable official cost of production studies and records are in existence proving inadequate returns to agriculture. This information should be widely circulated so that the public may know the truth. Further studies of cost of production, together with comprehensive studies of marketing, including prices actually received by farmers, are also needed.

Neither the day nor the week is a unit upon which agricultural costs or income can be satisfactorily based. Conditions are so variable that it is difficult to prescribe a rule applicable to all localities or to any locality at all seasons. It is, however, becoming most difficult for farmers to secure laborers who are willing to work more hours than do laborers in other industries. Experience shows that the hours of farm hired laborers approximates the hours of labor finally prescribed in other industries. The nature of agricultural work is such that it can not economically adjust itself to a specific hour day. If a definite hour per day basis is determined upon in other industries, however, this basic day must be the unit of all estimates in farm production costs.

Economic conditions should be such that the farmer may operate his land so that its fertility shall be maintained and perpetuated. An adequate future supply of food requires that the fertility of the soil should be conserved and replenished. The people should unite in all measures, legislative or otherwise, that will permit and accelerate the movement of fertilizers in such form and quantities and at such prices as will enable farmers to maintain and conserve soil fertility.

Economic and industrial conditions in agriculture necessitate co-operative marketing. Legal obstacles are now handicapping such effort. All necessary amendments should be made to state and federal laws to clearly preserve to farmers the right of co-operatively marketing their farm products.

Economic efficiency in agriculture is promoted by every agency which adds to the knowledge, experience, satisfaction, technique and equipment of the individual farmer. For these purposes, strong, self-supporting farmers' organizations are urged, to develop leadership from their own ranks and in accord with their own best interests, and to represent the industry in its contact with other industries and with the public.

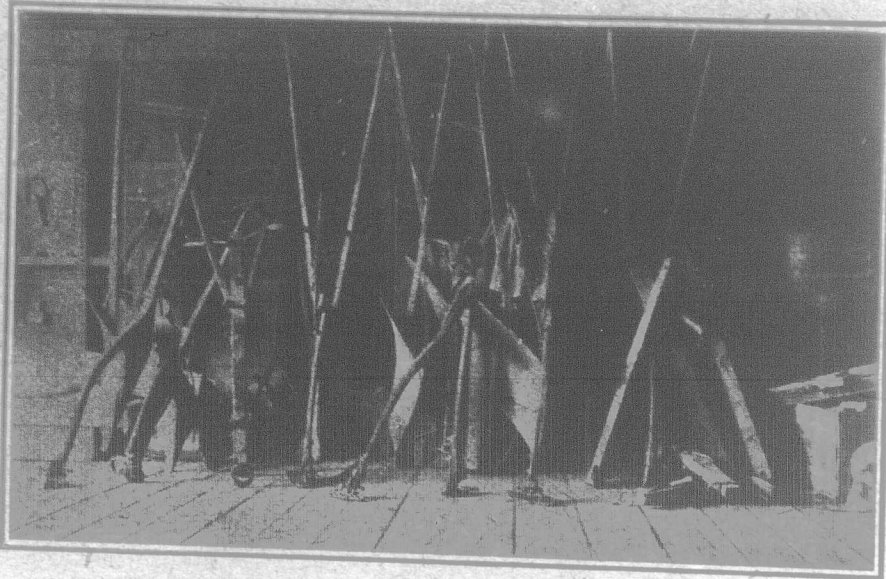
Adequate food storage reservoirs are essential to a well-fed people. In time of heaviest production foods should be stored away in such quantities as will tide over periods of non-production. Depletion of these supplies during the harvest months will probably mean bread lines before spring. Wise public policy will encourage properly regulated storage by farmers and others of essential reserves of food.

Much of the complaint of the high cost of living is the result of extravagant living. The cost of living is high or low according as the price of necessities of life rise above or fall below the general level of salaries, wages and income. The present cost of living is not due to the prices received by the farmer for his products, as shown by a comparison between farm prices, food prices and wage levels. Reliable government statements indicate that the percentage of increase in food prices is not as great as that of other commodities entering into the cost of present-day living or of the level of wages in other industries.

Land tenancy is increasing, farm ownership is concentrating in the hands of non-resident land owners, a condition which from historic precedent presages declining national virility, and if not checked ultimately a feudal peasantry. An independent, successful and permanent agriculture with the essential schools, churches, and social facilities, can not be maintained on the basis of absentee ownership. Its evitable end is not only a

practice, however, certain members, through intensive organizations, acquire and exercise undue influence, destroying thereby the harmony which should exist between all the essential elements. The situation which has brought about this conference is due to lack of recognition of this basic duty of government. Agriculture comes into this Industrial Conference seeking to give practical expression to this idea. The representatives of agriculture believe that capital, labor and agriculture are the three principal members of the industrial body and must have equal rights and equal treatment.

Farmers aware of the disparity that has arisen are earnestly endeavoring through their organizations to secure for agriculture its proper field of influence in this triumvirate, so that all may be subjected to the welfare of the whole, contending the while that influence and activity developed within the ranks of agriculture are superior to paternalism of any kind, and the only adequate means of developing its innate strength and power. Farm organizations now make articulate the demand of farmers everywhere that capital and labor shall not continue and make more unbearable the economic conditions which have caused the decline in agriculture.



Using Space Economically for Storing Plows.

social cleavage which is opposed to the principles of our American democracy, but another new and dangerous line of industrial cleavage and conflict. A permanent agriculture must be predicated on voluntary home-owning farmers, politically free, socially satisfied and economically independent.

The farmer's efforts to secure higher wages or better working conditions are not based on an organized refusal to work. His environment gives him those qualities which make him sought by many other occupations and professions. Banks, factories, stores transportation and commerce call to him to come to them, and the professions make their fine appeal. In the quiet of his home with his family about him, his boy and girl decide to heed that call. One more family has left the army of food producers and another family has joined the army of food consumers.

The availability of capital used in agriculture is a matter of public concern. Direct extension of federal credit through the land banks will reduce the cost of this capital, and should be made easier of access to all farmers. Associated credits of farm communities should be developed under proper laws and leadership.

These principles presented by representatives of agriculture in the Industrial Conference and transmitted by the employers' group are believed to be not only vital to agriculture, but vital to the common good. The highest concept of government in a democracy is to co-ordinate the functions of all its parts into a perfect and symmetrical whole. In the case of the individual the mind wisely protects physical well-being and produces proper physical and mental balance. Theoretically, democratic government does this for all its people. In

AUTOMOBILES, FARM MACHINERY AND FARM MOTORS.

Belts For Power Transmission.

Belting is one of the oldest and one of the most common devices used to transmit power from an engine to the machine that is to utilize it. The presence of friction between the belt and the revolving pulley is really what the transmission of power is dependent upon. The belt clings to the face of the driven pulley and causes the latter to revolve as the belt travels around it. Authorities tell us that the sides of a belt when connecting two pulleys and used for the transmission of power are under unequal tension. The term "effectual tension" is used to denote the actual force transmitted and is really the difference between the tension on each side. To determine the number of foot pounds of work transmitted per minute by means of the belt, it is only necessary to multiply the effectual tension by the velocity of the belt in feet per minute.

To calculate the horse-power of a leather belt, it is possible to make up a formula, if the velocity in feet per minute is known, and if the width of the belt in inches is known. A common rule for single-ply belting, and which assumes an effectual tension of 33 pounds per inch of width, is to multiply the velocity in feet per minute by the width of the belt in inches and divide by one thousand. This gives the horse-power of the belt. Thus, if a 10-inch belt travels at the rate of 4,000 feet per minute, the horse-power will be 40,000 divided by 1,000, or 40 horse-power. The velocity may be calculated from the number of revolutions per minute and the diameter of a driving pulley. One should always endeavor to avoid as little slipping and friction as possible, because the highest efficiency of belt transmission is secured in the absence of slipping or stretching and when the tension on the belt does not create undue pressure on the bearings.

Leather belting, if of good quality and kept well protected from heat and moisture, should last for ten or fifteen years of continuous service. It is advisable to run the hair or grain side of the leather next to the pulley, because if put on the opposite way, the grain side being firmer and possessing the greater part of the strength of the leather, may become cracked. This reduces the strength of the belt. It is a good plan to clean and oil belts occasionally in order to keep them soft and pliable. As a rule, mineral oils are not satisfactory. Resin is considered injurious, and many do not consider it necessary to use resin on a belt that is kept in good condition. There are various dressings upon the market, some of which are good and others not. Some prefer to have the under side of a horizontal belt the driving side, because the sag of the slack side will bring more of the belt in contact with the pulleys, thus preventing slipping to a certain extent.

Canvas and rubber beltings are used to a considerable extent, the latter is uniform in width and thickness and will resist more heat and cold than leather. It is, moreover, especially adapted to wet places, or where it will be exposed to the action of steam. It is not as durable as leather, but is quite strong and clings well to the pulley, so that it is less apt to slip and may be called upon to do very heavy service. A four-ply rubber belt is considered the equal of a single-ply leather belt in the transmission of power. Oil and grease must be kept away from rubber belting. Canvas belting is strong and durable and for this reason will stand hard service, such as must be expected of belting that is used with portable and traction engines. Very frequently it is found in the form of endless belts, but as such it is only suitable for use where the driving and driven pulleys are easily adjusted, as with portable machinery. Canvas belting stretches and contracts due to changes in moisture. As in the case of rubber belting, a four-ply belt is considered the equivalent of a single-ply leather belt.

Where it is not possible to determine the length of belt necessary merely by wrapping a tape line around the two pulleys, the following rule will give approximately the correct length: Add the diameter of the two pulleys, divide by two, multiply the result by three and a quarter,



"The New-world Idea."

A farm which lies in both Canada and the United States. Nothing more belligerent than a sign board divides the two great nations.