

## **Do You Know Your Machinery Costs?**

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As the costs of farming and ranching continue to climb upward, producers are often caught wondering how much they can afford to pay for the equipment and power needed to till, seed and harvest their croplands. A source of this information for producers is the web site of the North Dakota Farm Management Education Program at **ndfarmmanagement.com**. This website covers detailed production and financial information for agricultural operations across North Dakota, and also displays them by regions within the state. The total machinery cost per acre is basically made up of the fuel, repairs, custom hire, leasing, interest and equipment depreciation costs. A proven and systematic method of spreading these costs across the various farm enterprises is key to getting the right calculation of costs per acre.

Using the actual or accrued annual costs for such things as fuel and repairs is key to obtaining the most accurate calculations per acre. Typically a 10% charge on the remaining cost or invested value of the farm equipment is used to calculate the depreciation charge. This differs greatly from the fast depreciation or quick write off method that is often used for calculating income taxes. The included interest is also based on an accrual basis, so it reflects only the interest cost for one year.

In 2020 the average machinery cost for producers, within Region 3 of south-central North Dakota, for soybeans on cash rented land was calculated to be \$85.06 per acre. For the 20% low profit group the cost was \$88.48 while the high profit group came in at \$77.61 per acre. By contrast, this average cost in 2015 was \$74.26 per acre with the high profit group coming in at \$57.81 per acre and the low profit group at \$105.90 per acre. The total of all 2020 costs for the average producer was \$293.52 per acre. These 2020 costs included fuel at \$12.64, repairs at \$25.95 and depreciation at approximately \$35.00 per acre.

Corn on rented land, because it involves higher inputs, produced an average 2020 machinery cost of \$132.91 with the 20% low profit group averaging \$11.02 more at \$143.93 per acre. This would mean an additional cost of over \$11,000 on 1,000 acres of corn. In contrast to the 2020 cost, the 2015 average cost came in at \$102.65 per acre. This increase of \$30.26 per acre over just the last five years creates an additional burden on the net profit picture. In addition, it is noted that the average 2020 farm with 2,870 crop acres, had a machinery investment of \$336 per acre, while the high profit farms with 6,373 crop acres averaged \$354 and the low profit group with 1,390 crop acres averaged \$383 per acre. All of these individual costs, for various crops, profitability groups and years, can be viewed in the state and regional reports available at no charge on the **ndfarmmanagement.com** web site.

As producers struggle to identify and contain their production costs for various crops, while attempting to increase their net incomes per acre, they must be aware of the potential impact of increasing machinery or power costs. Individual producers must take into consideration several items including leasing versus ownership, the timeliness of custom operations and the ability to carry the debt that may be associated with investment in newer equipment. Each individual

producer must find the best combination of ownership and operating costs that will contribute to their bottom line.

The North Dakota Farm Management Education Program provides lifelong learning opportunities in economic and financial management for persons involved in the farming and ranching business. Visit [ndfarmmanagement.com](http://ndfarmmanagement.com), Facebook @NDFarmManagementEducation, or contact Craig Kleven, State Supervisor for Agricultural Education, at [crkleven@nd.gov](mailto:crkleven@nd.gov) or 701-328-3162 for more information. The ND Farm Management Education Program is sponsored by the North Dakota Department of Career and Technical Education.

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