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DETERMINING CUSTOM HARVESTING RATES FOR STORM DAMAGED CROPS

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What is a fair rate to charge for harvesting crops under abnormal conditions? Custom harvesting rates are typically charged on the basis of a flat rate per acre. An added charge per bushel over some minimum yield is sometimes a part of the custom rate schedule. In either case, these rates reflect machinery operating costs under normal conditions.*

Weather such as we frequently experience in Nebraska can cause harvesting conditions which are anything but normal. Machine accomplishment rates, in terms of acres per hour, may range from near-normal to only a small fraction the normal rate. Picking up damaged crops, running more plant material through the machine, muddy fields, problems resulting from feeding mud and ice into the machine and operating special attachments decrease the accomplishment rate and increase the cost per acre of operating harvesting machines. Thus, per acre custom harvesting rates should be increased under abnormal conditions.

For the grain producer whose income is reduced as a result of crop losses, an increase in the cost of harvesting may seem comparable to "hitting a man when he's down." But, if he wants to obtain the services of a custom operator, he must be prepared to compensate the operator in line with the increased costs of labor and machinery operation per acre. In most cases, hiring a custom operator who is willing to take extra care and use special attachments will result in less of a loss than leaving the crop in the field. However, the grain producer should carefully evaluate the situation and evaluate all alternatives, including harvesting the crop with livestock.

In an effort to arrive at a custom rate which is fair to both the grain producer and the custom operator, one of the following four approaches might be used.

1. A Base Rate Per Acre Plus an Hourly Charge

A custom operator using this approach would charge a per-acre rate of $3.50, for example, plus a per-hour rate of $14.00, for example. If he could accomplish 4 acres per hour, the rate would amount to $7.00 per acre. If adverse conditions cut him down to 2 acres per hour, the rate would amount to $10.50 per acre. If he could only harvest one acre per hour, the rate would amount to $17.50 per acre.

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* For a summary of custom rates under normal conditions, see E.C. 71-806, Farm Custom Rates Paid in Nebraska. Available at your County Extension Office.

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The Basis for This Approach

The reasoning behind this approach for determining a custom rate is this--The fixed costs of owning the machine may not change appreciably when operating under abnormal conditions. (This assumes that the machine would harvest about as many acres per year whether conditions were normal or abnormal.) The fixed costs include depreciation, interest on the machine investment, taxes, insurance, and housing. Because they don't change appreciably, the fixed costs are left on the per acre basis. They constitute the "base rate per acre."

On the other hand, the variable costs increase on a per acre basis under abnormal conditions. Fuel, lubricants, repairs, and labor costs per acre increase as the accomplishment rate drops. The variable costs are impossible to predict, but they are more directly related to the hours of operation than they are to the acres accomplished. Thus, the variable costs should be charged on a per hour basis.

An advantage of this approach is that it automatically compensates for varying field and crop conditions. It eliminates the main disadvantage of a flat rate per acre--that changes in the weather may improve or worsen harvesting conditions from the time that a rate is agreed upon until the harvesting is completed.

Determining the Rate

How can you use this approach if you don't know what the fixed and variable costs of operating a harvesting machine are? Fixed costs of harvesting machines usually exceed the variable costs for an individual farmer who does no custom work. Sometimes they are double the variable costs. But, most persons doing custom work probably operate their machines enough hours each year so that the fixed and variable costs are about equal. Thus, if a custom operator charges $7.00 per acre for harvesting milo under normal conditions, his fixed costs and variable costs are each about $3.50 per acre. If he can harvest 4 acres per hour under normal conditions, his variable costs per hour are 4 x $3.50, or about $14.00 per hour. Thus, under adverse conditions he would charge $3.50 per acre (fixed costs) plus $14.00 per hour (variable costs).

When determining an accomplishment rate to use in this calculation, you might want to think in terms of how many acres you can harvest in a day under normal conditions. Forty acres in a 10 hour workday amounts to 4 acres per hour, for example. It is important that you be consistent in terms of the items that you include in the normal accomplishment rate and the items that you include when charging an hourly rate. If items such as minor maintenance, lubrication, refueling, and cleaning out the machine are included when calculating the "normal" accomplishment rate, then the time required for these items should be included in the hours charged for under an hourly rate.

As an additional example--a smaller machine which would only accomplish 3 acres per hour under normal conditions at $7.00 per acre would have a variable cost of 3 x $3.50, or $10.50 per hour.

For either size of machine, if the accomplishment rate were decreased to one-fourth of normal, the resulting harvest cost would increase from $7.00 per acre to $17.50 per acre.

Each example presented here applies to a specific custom rate and a specific size of machine. You can determine the base rate and hourly charge for a specific machine by using your "normal" custom rate and "normal" machine accomplishment rate.

Added Costs of Special Attachments

The example rates computed above do not allow for the costs of owning and operating special attachments, such as Hesston heads, Roll-a-cones, or a Hume reel. Since these special attachments are typically used only in years when the crops are down, their fixed costs per acre of use tend to be high. A reasonable estimate of the added costs of using Hesston heads on a combine is $2.50 per acre. This is the total of about $2.00 per acre fixed cost and $.50 per acre variable cost. This estimate assumes that the heads would be used about 1/3 of the time on milo, over a period of years. The grain producer must weigh the returns from a more complete harvest against the added cost of the special attachments. When crops have been damaged by a storm, the special attachments will usually more than "pay their way."

If we use a Hesston head on either of the machines discussed above, we could add the $2.50 to the base rate per acre, increasing it from $3.50 to $6.00. It would be slightly more accurate to treat the fixed and variable costs of the heads the same as we did for the combine, or a per acre and a per hour basis. But, not much accuracy is lost by putting the entire $2.50 on a per acre basis, and it is simpler. If the hourly rate for the combine were $14.00 and if two acres could be harvested per hour, the harvesting cost would amount to $13.00 per acre. An accomplishment rate of one acre per hour would result in a harvesting cost of $20.00 per acre.

2. A Share of the Crop

Offering a custom operator a share of what he harvests may give him an incentive to salvage more grain from a field than he would on a per acre or per hour rate. This is not a common method of charging for custom harvesting grain, but it may have some advantages under severe harvesting conditions.

Since this is not a common method of charging, there are no "normal" established share of the crop for custom harvesting. The share agreed upon would no doubt increase with worsening crop and field conditions and would depend on the potential yield and value of the crop.

3. A Flat Rate Per Acre

Many grain producers and custom operators prefer to use a flat per acre rate because of its simplicity. Once a rate is agreed upon, the producer knows what his harvesting cost will be. However, the amount of "down" grain that is salvaged depends upon the character of the custom operator. He gets the same pay whether he clips off the standing heads or if he goes down after the fallen heads. Usually the grain producer and custom operator have similar views on what kind of a harvesting job should be done. But, in cases where there is any possibility of differing opinions, the harvesting job that the

grain producer expects should be discussed when the flat per acre rate is established.

As mentioned earlier, if a flat rate is agreed upon in advance, weather may change field and crop conditions by the time the job is actually completed. Thus, one party could benefit at the expense of the other in a given year. If they are interested in a continuing relationship, they might want to choose a more flexible rate, such as outlined in section 1 above.

The procedure outlined in section 1 above could be used in establishing a flat rate per acre under abnormal conditions. For example, if the rate computed in section 1 was $6.00 per acre plus $14.00 per hour, the custom operator could estimate his accomplishment rate based on his observations of the field. If he felt he could harvest 2 acres per hour, he might set a flat rate of $13.00 per acre.

4. An Hourly Rate

Another alternative for custom rate charges is a straight hourly rate. In contrast to the base rate plus an hourly charge which was discussed in section 1, the straight hourly rate puts all costs (fixed and variable) on an hourly basis. This method would be the logical choice if the acreage harvested by a machine were reduced significantly in years of abnormal harvesting conditions. Also, if it is felt that harvesting under abnormal conditions appreciably increases the actual depreciation of the machine, a case could be made for charging all costs on an hourly rate. However, we should remember that the repair costs were on an hourly rate in section 1, so that actual depreciation is likely to be the same as under normal conditions.

An estimate of the hourly charge for a machine can be made by multiplying the normal custom rate per acre times the accomplishment rate. Thus, if the normal rate were $7.00 per acre and a machine could harvest 4 acres per hour under normal conditions, the estimated hourly charge would be $28.00.

Supply and Demand

The bargaining position of the grain producer as well as that of the custom operator many times determines the actual rate which is agreed upon, regardless of the method of charging. The grain producer needs to get his crop out. The custom operator needs to pay for his machine. However, an imbalance between acreage of crops to be harvested in a local area and the number of custom operators available can cause rates which differ from those which we might estimate as fair or normal