Guide to Custom Farmwork and Short-Term Equipment Rental

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Factsheet -

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INTRODUCTION

This Factsheet provides several decision-making tools for farm managers and custom farmwork operators managing the use of equipment and work time to meet production and profit goals. Table 1 outlines advantages and disadvantages to three options. Rental values in this Factsheet are in imperial measurements, reflecting common usage in the industry.

Hiring custom farmwork allows farm managers to purchase fieldwork and other services instead of owning the equipment and doing the work. This Factsheet considers owning or a multi-year equipment lease versus hiring custom farmwork or short-term equipment rental. For more information on multi-year lease agreements, see the OMAFRA Factsheet, *Lease Agreements*, *Farm Equipment*.

For equipment owners, providing custom farmwork services can be the focus of a business, a sideline farming enterprise that spreads equipment ownership costs over more acres or a marketing tool to complement the sale of other farm inputs.

Table 1. Equ	uipment use options	
Option	Advantages	Disadvantages
Own or lease (long-term) equipment	 Equipment and operator are ready and available when needed, especially for weather-sensitive operations such as planting, spraying and harvesting. Timeliness of operation impacts directly on yield, product quality and farm revenue. Farm manager has direct control of operating decisions. Farm manager develops and maintains hands-on knowledge of operation. Risk of weed transfer or biosecurity concerns is reduced. 	 Farm business may not be large enough to cover the equipment's ownership and operating costs. Equipment replacement rate may not keep pace with new technology. The farm may not be able to supply the labour at the time the operation is required. Farmer is required to master an additional management skill set. Farmer is responsible for repairs beyond warranty when owned or as per lease agreement.
Hire custom farmwork	 Farm manager gains use of newer and more efficient equipment without full cost of ownership/operating expenses. Custom operator provides expertise gained from a wider experience. Custom operator maintains required regulatory certification. Farmer can be busy elsewhere while custom operator provides service. No direct repairs and maintenance costs. 	 Custom operator may not be available at the most optimum time, resulting in reduced yield, product quality and revenue. Farm manager loses direct control of operation. Farm manager is dependent on the availability of custom operators. Risk of weed transfer and other biosecurity concerns is increased.
Rent equipment, short-term	 If equipment is available, farm manager controls the operation and the timeliness of the work. Farm manager gains the use of equipment without the full cost of ownership and operating expenses. Repairs and maintenance are made as per agreement. 	 Availability of equipment affects timeliness of operation. Rental equipment may not be available due to lack of year-round demand or over-demand during a short season of use.

SURVEY OF CUSTOM FARMWORK AND SHORT-TERM EQUIPMENT RENTAL RATES CHARGED IN 2015

Appendix A, *Survey of Custom Farmwork Rates Charged in 2015* (page 11–15), shows the results of a survey of the rates charged in 2015 by 220 Ontario custom farmwork operators. The survey included:

- full-time custom operators
- farmers providing custom farmwork as a significant sideline business
- farmers providing limited custom farmwork to neighbours
- farm input suppliers providing custom application as a service

The custom rate charged included the equipment, fuel and operator cost but excluded the cost of material applied.

Use these rates as a guide in making management decisions. There is no assurance that using the "average" rates reported here will cover the cost of providing the service. Custom operators should carefully calculate all costs and returns before setting prices. See *Guide to Calculating Custom Farmwork and Short-Term Equipment Rental Rate Charges*, on page 3.

The appendices show ranges for the rates, as many factors can cause variations in the rates charged, including:

- type, size, age of equipment
- amount of use (number of acres covered or hours used)
- availability of the equipment in the local area
- field shape, size and topography
- · soil conditions
- · local tradition

Appendix B, Survey of Short-Term Equipment Rental Rates Charged in 2015, on page 16, summarizes 20 reports of short-term tractor rental rates from custom operators. Appendix C, used with permission, is taken from Iron Solutions' Eastern Canada Winter Official Guide, a survey of tractor rental rates charged by Eastern Canadian machinery dealers in 2015.

Survey details

Results are summarized by province and by six smaller regional areas, shown in Figure 1. Where available, the 2012 provincial average rates from the previous survey are also listed.

Average rates

An average rate is given when there are at least three reports. The greater the number of reports, the more the summary reflects the market rates.

Percentiles

Percentiles have been used to help show the range of the rates that were charged. For example, in the Provincial Summary, the 15th percentile for corn combining with grain buggy is \$40/acre and the 85th percentile is \$48/acre. This means that 15% of those surveyed charged \$40/acre or less and 15% charged more than \$48. Seventy percent (85th–15th percentile) of all those reporting charged between \$40 and \$48/acre. The average rate charged was \$44/acre.

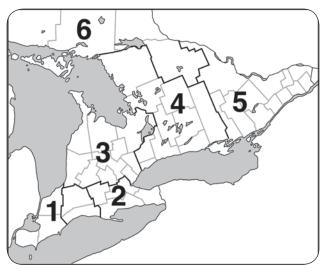


Figure 1. Map of Ontario divided into survey areas.

- Area 1 Chatham-Kent, Elgin, Essex, Lambton, Middlesex
- Area 2 Brant, Haldimand, Hamilton, Niagara, Norfolk, Oxford
- Area 3 Bruce, Dufferin, Grey, Halton, Huron, Peel, Perth, Simcoe, Waterloo, Wellington
- Area 4 Durham, Haliburton, Hastings, Kawartha Lakes, Muskoka, Northumberland, Parry Sound, Peterborough, Prince Edward, York
- Area 5 Frontenac, Lanark, Leeds-Grenville, Lennox-Addington, Ottawa, Prescott-Russell, Renfrew, Stormont-Dundas-Glengarry
- Area 6 Algoma, Cochrane, Kenora, Manitoulin, Nipissing, Rainy River, Sudbury, Thunder Bay, Timiskaming

GUIDE TO CALCULATING CUSTOM FARMWORK AND SHORT-TERM EQUIPMENT RENTAL RATE CHARGES

The Custom Farmwork Rate Calculator and the Short-Term Equipment Rental Rate Calculator are reproduced here. Downloadable spreadsheet versions are available online at ontario.ca/agbusiness. Example calculations are based on market prices and Tables 3, 4 and 5 of this Factsheet. See the OMAFRA Factsheet, *Budgeting Farm Machinery Costs*, for additional machinery cost information.

Farm managers who use the equipment in their own operations as well as providing custom farmwork to others should calculate costs using the total of own farm and custom acreage and operation hours.

Custom Farmwork Rate Calculator

POWER UNIT (TRACTOR O	R SELF-PROPELLED MACHINE)		
Annual fixed cost			
Depreciation	= (purchase price – trade-in value [from Table 3]) life of machine (years)	=	
Interest*	= (purchase price + trade-in value [from Table 3]) x annual interest rate 2	=	
Insurance & housing	= purchase price x 1.0%	=	
TOTAL fixed costs/year		=	(A)
Annual operating cost			
Fuel & lubricants [Table 5]	= (L/hr x hr/yr x fuel cost/L x 1.15)	=	
Repairs	= [estimate using Table 4]	=	
TOTAL operating costs/	year	=	(B)
+ MACHINE (TILLAGE IMPL	LEMENT, PTO MACHINE, OTHER)		
Annual fixed costs			
Depreciation	= (purchase price - trade-in value [from Table 3]) life of machine (years)	=	
Interest*	$= \frac{\text{(purchase price + trade-in value [from Table 3]) x annual interest rate}}{2}$	=	
Insurance & housing	= purchase price x 1.0%	=	
TOTAL		=	(C)
Annual operating costs			
Repairs	= [estimate using Table 4]	=	
TOTAL		=	(D)
= ANNUAL MACHINERY CO	OSTS (A+B+C+D)	=	(E)
+ Profit margin (return to ma suggest 15% of machiner		=	(F)
+ Operator labour (self or hi	ired)		
# of machinery hours (sug	ggest 15% over machine-hr for travel, downtime) x 1.15 x wage/hr	=	(G)
= TOTAL costs (E+F+G)		=	(H)
= CUSTOM RATE	= H Total annual acres or H Total annual hours	=	(I) per acre or per hour

^{*} Interest: Interest calculation is the average annual interest cost of the investment (yours and/or the lender's) that is tied up in the machine.

EXAMPLE 1. Custom farmwork rate calculation

The following example calculates a custom farmwork rate for a combine with corn and soybean heads scheduled to be traded in 5 years.

Life (years) = 5 Purchase price = \$600,000 Trade-in value = \$270,000 Interest rate = 4.0%

Acres/year = 3,000 Hours per year = 300 Fuel cost/L = \$1.00

Corn/soy average acres/hr = 10 Average fuel used (L/hr) = 57

Annual fixed cost				
Depreciation	= (purchase price – trade-in value [from Table 3]) life of machine (years)	=	\$66,000	
Interest	$= \frac{\text{(purchase price + trade-in value [from Table 3]) x annual interest rate}}{2}$	=	\$17,400	
Insurance & housing	= purchase price x 1%	=	6,000	
TOTAL fixed costs/ye	ear	=	\$89,400	(A)
Annual operating cost				
Fuel & lubricants	= (L/hr x hr/yr x fuel cost/L x 1.15)	=	\$19,665	
Repairs	= [estimate using Table 4]	=	11,160	
TOTAL operating cost	s/year	=	\$30,825	(B)
+ MACHINE (TILLAGE II	MPLEMENT, PTO MACHINE, OTHER)			
1. Annual fixed costs		=	0	(C)
2. Annual operating cost	rs .	=	0	(D)
= ANNUAL MACHINERY	COSTS (A+B+C+D)	=	\$120,225	(E)
+ Profit margin (return to suggest 15% of mach	o management, admin. costs): inery costs (E x 0.15)	=	\$18,035	(F)
+ Operator labour (self of	or hired)			
# of machinery hours	(suggest 15% over machine-hr for travel, downtime) x 1.15 x wage/hr	=	\$6,900	(G)
= TOTAL costs (E+F+	0)	=	\$145,160	(H)

In this example, if the operator combines 3,000 acres at \$48/acre, the return to management is \$18,035 (\$6.01/acre or \$60.12/machine-hr), and the return to labour is \$6,900 (\$2.30/acre or \$23.00/machine-hr). The custom farmwork operator also earns a return of 4% interest on the owner's equity in the machinery.

Cash Flow Considerations

The example above calculates machinery costs and returns to management, labour and investment. The estimated annual depreciation and interest costs total \$83,400. From a cash flow point of view, the depreciation is not a draw on the bank line. However, in the case of financing, loan payments are a cash flow requirement.

Actual loan principal and interest payments will depend on the amount financed and will be different from the figures in the example. It is possible to cash flow actual expenses at a lesser rate than the example, but this would come at the cost of lower returns to management, operator labour and the owner's equity tied up in the machine.

Table 2. Cost per acre com	parison		
	2,500	3,000	3,500
	acres	acres	acres
Machinery fixed costs	\$35.22	\$29.80	\$25.95
Machinery operating costs	\$9.62	\$10.30	\$11.00

\$6.73

\$2.30

\$53.87

\$6.02

\$2.30

\$48.42

\$5.54

\$2.30

\$44.79

The capital cost of the equipment (purchase/trade-in values) and the number of acres worked are the two largest factors affecting price rate and, therefore, have the biggest impact on profitability. Table 2 shows how

volume of acres affects the per acre costs in order to

receive total returns equal to the 3,000 acres used in the previous example.

Return to management

Return to labour

Total rate

Short-Term Equipment Rental Rate Calculator

= RENTAL RATE	= L L Total annual acres or Total annual hours	=	(M) per acre or per hour
= Total costs (E - J + K		=	(L)
O (to management, admin. costs): hinery costs less fuel and lubricants: (E – J) x 0.15	=	(K)
 Total fuel and lubrica 	int cost (if any) (from Custom Farmwork Rate Calculator, above)	=	(J)
+ Machinery costs (fro	m Custom Farmwork Rate Calculator, above)	=	(E)

Note: Rental rates may have minimum daily or weekly rates.

EXAMPLE 2. Short-Term Equipment Rental Rate Calculation

The following example calculates a short-term rental rate for the same combine with corn and soybean heads used in Example 1.

= RENTAL RATE = $\frac{L}{\text{Total annual acres}}$ or $\frac{L}{\text{Total annual hours}}$ Note: Rental rates may have minimum daily or weekly rates.	=	\$38.58/ac or \$385.83	
= Total costs (E – J + K)	=	\$115,748	(L)
+ Profit margin (return to management, admin. costs): suggest 15 % of machinery costs less fuel and lubricants: (E – J) x 0.15	=	+\$15,097	(K)
- Total fuel and lubricant cost (if any) (from Example 1, Custom farmwork rate calculation)	=	- \$19,665	(J)
+ Machinery costs (from Example 1, Custom farmwork rate calculation)	=	\$120,315	(E)

Table 3, *Trade-in values on farm machinery as a percent of purchase cost*, and Table 4, *accumulated repair costs as a percent of purchase price*, provide information used in the example calculations.

Table 3. Trade-in values on farm machinery as a percent of purchase cost

End of		Tractors				Ot	her Machin	ery		
Year	<80 hp ¹	80-149 hp	150+ hp	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7
1	60	68	67	74	49	56	65	47	61	69
2	54	61	59	62	44	50	60	44	54	62
3	50	57	54	54	40	46	56	42	49	56
4	46	53	49	48	37	42	53	40	45	52
5	43	49	45	43	35	39	50	39	42	48
6	41	46	42	38	32	37	48	38	39	45
7	38	44	39	34	30	34	46	36	36	42
8	36	41	36	31	28	32	44	35	34	40
9	34	39	34	28	27	30	42	34	31	37
10	33	37	32	25	25	28	40	33	30	35
11	31	35	30	23	24	27	39	32	28	33
12	29	33	28	20	23	25	38	32	26	31
13	28	32	26	18	21	24	36	31	24	29
14	27	30	24	17	20	22	35	30	23	28
15	25	29	23	15	19	21	34	29	22	26
16	24	28	21	13	18	20	33	29	20	25
17	23	26	20	12	17	19	32	28	19	24
18	22	25	19	10	16	18	30	27	18	22
19	21	24	18	9	16	17	29	27	17	21
20	20	23	17	8	15	16	29	26	16	20

Source: American Society of Agricultural Engineers Standards, American Society of Agricultural Engineers, 1999

- Group 1: Combines, self-propelled forage harvesters.
- Group 2: Swathers, mower-conditioners, rotary hay mowers, rotary mower-conditioners.
- Group 3: Forage harvesters, balers, bale elevators, tub grinders, augers, grinder-mixers, forage boxes, roller mills.
- Group 4: Planters, drills, sprayers.
- Group 5: Moldboard plows, chisel plows, cultivators, V-rippers.
- Group 6: Disks, harrows, hoes.
- Group 7: Manure spreaders, miscellaneous equipment.
- 1 hp = 1 horse power

Table 4. Accumulated repair costs as a percent of purchase price

	Quarter L	.ife	Half Life	е	Three-Quarto	er Life	Full Life		
Machine	Accumulated Hours	Costs	Accumulated Hours	Costs	Accumulated Hours	Costs	Accumulated Hours	Costs	
2-wheel tractors	3,000	6.2%	6,000	25.0%	9,000	56.2%	12,000	100%	
4 WD ¹ and MFWD ² tractors	4,000	4.8%	8,000	19.2%	12,000	43.2%	16,000	80%	
Self-propelled combines	750	2.2%	1,500	9.3%	2,250	21.9%	3,000	40%	
Planters, drills	375	4.1%	750	17.5%	1,125	41.0%	1,500	75%	
Moldboard plows	500	8.3%	1,000	28.7%	1,500	59.6%	2,000	100%	
Disk, disk harrows	500	5.5%	1,000	18.0%	1,500	35.9%	2,000	60%	
Chisel plows	500	10.1%	1,000	26.5%	1,500	46.8%	2,000	75%	
Cultivators	500	10.2%	1,000	27.0%	1,500	47.6%	2,000	70%	
Mowers	500	14.2%	1,000	46.2%	1,500	92.0%	2,000	150%	
Square balers, small	500	6.6%	1,000	23.0%	1,500	47.7%	2,000	80%	
Square balers, large	750	6.0%	1,500	20.7%	2,250	43.0%	3,000	75%	
Large round balers	375	7.4%	750	25.9%	1,125	53.6%	1,500	90%	
SP forage harvesters	1,000	3.1%	2,000	12.5%	3,000	28.1%	4,000	50%	
Rakes	625	8.6%	1,250	22.7%	1,875	40.1%	2,500	60%	

Source: American Society of Agricultural Engineers Standards, American Society of Agricultural Engineers, 1999.

² MFWD = mechanical front-wheel drive

New combine cost	\$600,000
Projected use	15,000 acres or 300 hours per year over 5 years
Estimated accumulated repair costs*	9.3% of purchase cost (estimated using Table 4)
Repair costs	Approx. \$55,800 (\$600,000 x 9.3%) over 5 years for an average of \$11,160/year
Used machinery	When calculating the depreciation on used machinery, use the actual price paid for the machine minus its expected trade-in or salvage value, divided by the expected life of the machine on your farm. Increase repair rates to levels appropriate for the age or number o hours on the machine. Expect to have higher than normal repair expenses in the first year of ownership of a used machine as you bring it back into top operating shape.
* at 1.500 hr	

 $^{^{\}scriptscriptstyle 1}$ WD = wheel drive

Table 5. Performance, horsepower and		selected farm equipr		Т
	HP required	acres/h	L/acre	L/h
4–18-in. furrow plow	75	2.8	4.5	12.5
6–18-in. furrow plow	130 MFWD	4.2	5.1	21.6
8–18-in. furrow plow	160	5.6	4.7	26.5
12.5-ft field cultivator	75	9.0	1.4	12.5
18-ft field cultivator	105 MFWD	13.0	1.3	17.4
37-ft field cultivator	225	26.7	1.4	37.5
11-ft chisel plow	75	5.9	2.1	12.5
15-ft chisel plow	130 MFWD	8.0	2.7	21.6
11-ft tandem disk	60	6.4	1.5	9.9
15-ft tandem disk	105 MFWD	8.7	2.0	17.4
4-row-36-in. row crop planter	40	5.6	1.2	6.8
6-row-30-in. row crop planter	60	7.0	1.4	9.9
12-row-30-in. row crop planter	105 MFWD	14.0	1.2	17.4
4-row-36-in. minimum-till planter	60	5.1	1.9	9.9
6-row-30-in. minimum-till planter	75	6.4	2.0	12.5
8-row-30-in. minimum-till planter	105 MFWD	8.5	2.1	17.4
25-ft grain drill	130 MFWD	4.7	4.6	21.6
35-ft grain drill	160 MFWD	14.9	1.8	26.5
12-ft presswheel drill	75	5.1	2.5	12.5
20-ft presswheel drill	130 MFWD	8.5	2.5	21.6
15-ft no-till drill	130 MFWD	6.4	3.4	21.6
20-ft no-till drill	160 MFWD	8.5	3.1	26.5
30-ft sprayer	40	15.4	0.4	6.8
50-ft sprayer	60	25.6	0.4	9.9
9-ft mower conditioner	40	4.4	1.6	6.8
9-ft rotary mower/conditioner	75	6.6	1.9	12.5
Square baler	40	4.4	1.6	6.8
Round baler 1,000 lb	60	3.0	3.3	9.9
Round baler 1,500 lb	60	4.0	2.5	9.9
Large size square baler	130 MFWD	16.3	1.3	21.6
Round baler 1,000 lb/wrapper	60	3.0	3.3	9.9
2-row forage harvester	105 MFWD	1.4	12.5	17.4
Large forage blower	60	_	_	9.9
Combine 4-row-30 in. corn head	190	2.8	11.4	31.8
Combine 12-row-30 in. corn head	275	7.6	6.0	45.9
Combine grain head 20 ft	220	6.8	5.4	36.8
Combine grain head 30 ft	275	10.2	4.5	45.9
Combine soybean head 15 ft	220	4.5	8.2	36.8
Combine soybean head 25 ft	275	7.4	6.2	45.9

Source: American Society of Agricultural Engineers Standards, American Society of Agricultural Engineers, 1999. MFWD = mechanical front-wheel drive

FACTORS TO CONSIDER IN A CUSTOM FARMWORK AGREEMENT

Custom hiring is a business arrangement. Write the terms of the arrangement in a formal agreement. If unwritten, the terms are more likely to be misunderstood in the case of a dispute. While written custom hiring agreements have not been common in the past, increased demands for nutrient management plans, quality assurance programs and environmental stewardship records give added incentive beyond the business benefits of written agreements. Consider the following in a custom hiring agreement.

Timeliness

Significant losses can occur if an operation is not started or completed on time. To facilitate planning, include a schedule of operations for both parties in the custom hiring agreement. Such a schedule would be subject to weather conditions and crop maturity.

Operations

Write into the agreement the exact operations to be performed by each party and the machine, materials and labour to be supplied by each.

Rate Schedule

Stipulate the rate for each operation to be performed on the basis of acreage, time (hour, day, week) or total operation performed.

Management

State that both the custom operator and the owner will adhere to appropriate and accepted farming practices in his or her respective part of the farming operations. The contract provides an opportunity to clarify management roles and responsibilities, create mutual understanding and provide a dispute resolution mechanism.

Environmental matters

While the owner is ultimately responsible for activities occurring on the property, regulatory authorities can charge any one of the owner, the tenant farmer or the contract operator for causing environmental damage. It is the responsibility of each party to understand his or her environmental responsibilities. Where the custom farmwork operation carries the risk of an environmental spill, such as in manure or pesticide application, it is important that a contingency plan exists that identifies the containment and clean-up process, which party has the authority to initiate the

contingency plan and to which party the clean-up costs are assigned.

Terms of payment

Stipulate terms of payment for custom operations. Bill the client upon the completion of each custom operation, indicating actual units (hours, acres, etc.) completed, the rate charged per unit, the total charge and the date payment is due.

Termination

Include a minimum period for notice of termination in a custom hiring agreement. State penalties, if any, for termination or for failure to give appropriate notice of termination

OTHER CONSIDERATIONS

Insurance

A custom operator may be classified differently from a farmer when insuring equipment. Be clear with the insurance company about which role you are playing if considering doing custom work or renting out equipment.

Workplace Safety and Insurance Board (WSIB)

Custom operators are responsible for carrying appropriate WSIB coverage for their employees. The WSIB issues Clearance Certificates to employers to document this WSIB employee coverage.

WSIB coverage is optional for sole proprietors, partners, independent operators and executive officers of a corporation, who are responsible for their own insurance coverage.

A WSIB Independent Operator Ruling documents that the custom operator is not considered to be an employee of the farmer by the WSIB.

The WSIB deems the operator of the equipment to be an employee of the farmer during the custom farmwork unless the custom equipment operator has either a WSIB Clearance Certificate or a WSIB Independent Operator Ruling.

Farmers should ask the custom operator to see a copy of a WSIB Clearance Certificate or WSIB Independent Operator Ruling prior to the work. If there is no Clearance Certificate or Independent Operator Ruling, custom operators should itemize the labour component of the custom rate charge on the bill so

that the farmer can pay the required WSIB premiums on the equipment operator's labour.

For further information on WSIB responsibilities visit www.wsib.on.ca or contact the WSIB at 1-888-259-4228.

Licences and certifications

The custom operator should maintain, as required, any regulated certifications or licences for the equipment and equipment operators involved in the custom work.

SUMMARY

Contracting custom farmwork will continue to allow farm managers to manage machinery costs and technical skills. Developing clear custom farmwork contracts is a benefit to both the farm manager and the custom operator.

This Factsheet is intended as general information, not specific advice concerning individual situations. Discuss individual custom farmwork agreements with your lawyer. The Government of Ontario assumes no responsibility for persons using this publication as a basis to draft a custom farmwork agreement or to set custom farmwork and short-term equipment rental rates.

Averages shown in the tables are a simple average of the rates charged in 2015 across Ontario as reported in a survey of Ontario custom farmwork operators. Percentiles show the range of the rates that were charged. There is no assurance that using the average rates reported here will cover the cost of providing the service. Before setting prices, carefully calculate all costs and returns.

REFERENCES

The author would like to gratefully acknowledge the permission given by the authors of the following publications from which portions of this paper were developed:

Farm Machinery Custom and Rental Rate Guide 2014-15. Prairie Agricultural Machinery Institute (PAMI) and Saskatchewan Ministry of Agriculture.

Acquiring Farm Machinery Services, 2012. William Edwards, retired extension economist, and Vernon M. Meyer, retired extension agricultural engineer, Iowa State University Extension.

Iron Solutions Eastern Canada Region Winter 2015 Official Guide. Dealer edition.

The author also wishes to thank the custom farm operators who completed the survey of rates charged in 2015.

This Factsheet was written and updated by John Molenhuis, Business Analysis and Cost of Production Program Lead, Economic Development Division, OMAFRA, Brighton

Appendix A. Surv	ey of c	ustom	tarmwo	ork rate	s charg	ed in 20)15											
				Provinci	al		Are	a 1	Aı	rea 2	Ar	ea 3	Ar	ea 4	Ar	ea 5	Ar	ea 6
			2015	l .	015 entile	2012		2015		2015		2015		2015		2015		2015
Custom operation	Unit	#	avg.	15th	85th	avg.	#	avg.	#	avg.	#	avg.	#	avg.	#	avg.	#	avg.
TILLAGE										,						,		
Moldboard plow	acre	67	\$29	\$24	\$33	\$25	15	\$29	11	\$27	31	\$29	4	\$29	4	\$31	_	_
	hour	50	\$130	\$89	\$159	\$118	9	\$148	5	\$117	28	\$130	3	\$114	_	_	3	\$128
Chisel plow/soil	acre	63	\$24	\$20	\$26	\$22	19	\$26	11	\$22	25	\$22	_	_	3	\$27	4	\$26
saver	hour	43	\$190	\$115	\$270	\$164	13	\$182	6	\$169	19	\$194	_	_	_	_	3	\$157
Disc — primary	acre	45	\$19	\$15	\$25	\$17	12	\$19	7	\$17	17	\$18	3	\$21	3	\$16	3	\$24
tillage	hour	27	\$213	\$99	\$304	\$199	5	\$336	3	\$130	14	\$198	_	_	_	_	_	_
Disc — secondary	acre	38	\$17	\$13	\$20	\$15	8	\$16	5	\$15	18	\$16	_	_	3	\$18	_	_
tillage	hour	27	\$212	\$100	\$300	\$185	5	\$289	3	\$116	15	\$198	_	_	_	_	_	_
Vertical tillage	acre	63	\$20	\$15	\$25	\$17	17	\$21	14	\$19	20	\$19	3	\$25	4	\$17	5	\$23
	hour	43	\$282	\$146	\$400	\$282	11	\$397	9	\$230	15	\$247	4	\$245	4	\$251	_	_
Zone tillage with	acre	6	\$23	_	_	\$21	_	_	_	_	4	\$20	_	_	_	_	_	_
fertilizer	hour	5	\$426	_	_	\$319	_	_	_	_	4	\$336	_	_	_	_	_	_
Field cultivate	acre	106	\$14	\$11	\$18	\$13	29	\$15	18	\$15	40	\$12	5	\$14	9	\$17	5	\$17
	hour	79	\$241	\$120	\$331	\$246	20	\$319	12	\$248	34	\$189	4	\$200	6	\$308	3	\$198
Harrowing	acre	11	\$7	\$5	\$8	\$10	_	_	_	_	6	\$7	_	_	_	_	_	_
	hour	9	\$141	\$71	\$234	\$113	_		_	_	3	\$178	_	_	_	_	3	\$98
Deep tillage/	acre	19	\$29	\$24	\$34	\$28	8	\$30	_	_	4	\$27	_	_	3	\$26	_	_
subsoiling	hour	15	\$215	\$141	\$277	\$191	5	\$261	_	_	6	\$185	_	_	_	_	_	_
Packer/rolling	acre	57	\$7	\$5	\$10	\$7	13	\$7	11	\$9	23	\$7	4	\$8	5	\$5	_	
,	hour	31	\$148	\$90	\$203	\$145	8	\$210	3	\$165	16	\$116	_	_	3	\$110	_	_
Stalk chopping	acre	9	\$14	\$12	\$16	\$11	4	\$16	_	_	_	_		_		_	_	_
77 3	hour	4	\$167			\$95								_		_	_	
PLANTING																		
Soybeans																		
Conventional row	acre	46	\$21	\$18	\$25	\$21	16	\$21	6	\$23	16	\$20	_	_	5	\$24	_	_
planter	hour	28	\$302	\$127	\$450	\$270	10	\$338	3	\$293	10	\$242		_	4	\$393		_
Minimum/no-till	acre	42	\$25	\$22	\$28	\$23	13	\$24	6	\$22	13	\$24	3	\$31	5	\$26	_	
planter	hour	26	\$346	\$158	\$525	\$322	10	\$362	3	\$243	9	\$392		_		_		
Conventional drill	acre	20	\$20	\$18	\$23	\$22	_		_	_	13	\$20		_		_		_
	hour	11	\$183	\$84	\$288	\$142	_		_	_	9	\$172				_	_	_
No-till drill	acre	80	\$24	\$20	\$26	\$23	22	\$24	14	\$23	27	\$22	7	\$25	5	\$27	5	\$28
	hour	58	\$246	\$149	\$367	\$209	18	\$240	11	\$177	17	\$265	4	\$258	5	\$315	3	
Air seeder without	acre	26	\$24	\$22	\$27	\$23	5	\$25	5	\$25	11	\$24		7200	4	\$25		
fertilizer	hour	17	\$422	\$312	\$545	\$449	4	\$444	_	Ψ <u>2</u> 0	10	\$399						
Air seeder with	acre	31	\$25	\$22	\$28	\$24	5	\$25	4	\$24	17	\$24						
fertilizer	hour	23	\$405	\$246	\$566	\$497	3	\$542	_	ΨΔ4	14	\$406					=	
	Hour	23	Ψ403	Ψ240	ΨΟΟΟ	Ψ+31	3	ΨJ42			14	Ψ+00						

				Provinci	al		Are	a 1	Aı	rea 2	Aı	ea 3	Ar	ea 4	Are	ea 5	Aı	rea 6
			2015		015 entile	2012		2015		2015		2015		2015		2015		2015
Custom operation	Unit	#	avg.	15 th	85th	avg.	#	avg.	#	avg.	#	avg.	#	avg.	#	avg.	#	avg.
PLANTING (cont'd)							ļ.											
Corn																		
Conventional row p	lanter																	
Row width 23 in. or	less																	
With starter	acre	23	\$21	\$16	\$25	\$22	4	\$24	4	\$20	11	\$21		_	3	\$23	_	_
fertilizer	hour	13	\$282	\$136	\$405	\$341	_	_	_	_	6	\$288	_	_	_	_	_	_
Without starter	acre	4	\$22	_		\$19	3	\$22	_	_	4	\$19		_	_		_	_
fertilizer	hour	3	\$297		_	_	3	\$297	_	_	<u> </u>			_			_	
Row width 24 in. or			, .															
With starter	acre	77	\$22	\$18	\$25	\$22	17	\$23	14	\$23	34	\$21		_	8	\$25	3	\$27
fertilizer	hour	49	\$315	\$140	\$440	\$284	11	\$315	7	\$287	23	\$312			5	\$391	3	\$269
Without starter	acre	7	\$20		7.70	\$18		-5010	_		5	\$20		_				
fertilizer	hour	 5	\$299			\$160					4	\$289						
Minimum/no-till	Hour		Ψ233			ΨΙΟΟ						Ψ200						
Row width 23 in. or	less																	
With starter	acre	8	\$25	\$20	\$30	\$24	5	\$26			3	\$23						
fertilizer	hour	6	\$214	Ψ20	Ψ30	\$293	4	\$261				Ψ25						
Row width 24 in. or			ΨΖΙΨ			Ψ233		Ψ201										
With starter		41	\$26	\$22	\$30	\$23	11	\$24	5	\$22	12	\$25	4	\$31	6	\$26	3	\$31
fertilizer	acre	30	\$273	\$138		-	8	\$353	4	-	7	\$314	3	\$179	4	\$324		<u> </u>
	hour	4	\$26	\$120	\$457	\$277	0	Φ 303	4	\$162	'	ФО14	3	Ф119	4	Φ324	4	\$170
Without starter fertilizer	acre	4	\$26	_	_	_	_	_	_	_	-	_	_	_	_	_		
Cereals (oats, barle	ey, whea	at)																-
Conventional drill																		
With starter	acre	16	\$19	\$15	\$24	\$20	_	_	_	_	10	\$18		_	_	_	_	_
fertilizer	hour	12	\$168	\$64	\$284	\$177	_		_	_	9	\$177		_	_		_	_
Without starter	acre	12	\$18	\$15	\$21	\$17	_		_	_	8	\$19		_	_		_	_
fertilizer	hour	6	\$153			\$136				_				_			_	
No-till drill	1		, , _ , ,			,												
With starter	acre	44	\$24	\$21	\$27	\$23	11	\$23	9	\$23	14	\$23	5	\$26	4	\$30	_	_
fertilizer	hour	27	\$247	\$157	\$337	\$202	7	\$206	6	\$210	9	\$324	3	\$232			_	
Without starter	acre	20	\$24	\$20	\$28	\$22	8	\$25	_	Ψ <u>2</u> 10	7	\$22		4202				
fertilizer	hour	13	\$268	\$160	\$368	\$173	7	\$305			3	\$267						
Air seeder without		14	\$24	\$20	\$28	\$22		φουο			8	\$24			3	<u> </u>		
fertilizer	acre				\$600		_			_	7			_	3	Ψ23	_	
Air agadar with	hour	11	\$438	\$300		\$475		фОГ		400	-	\$372			_			
Air seeder with fertilizer	hour	26 19	\$24 \$425	\$22 \$289	\$25 \$528	\$24 \$463	7 5	\$25 \$473	4	\$23	13 11	\$24 \$413						
Forages	Houl	19	Ψ420	Ψ209	ΨυΖΟ	Ψ403		Ψ+13	_		1	Ψ+13			_			
Drill	acre	25	\$24	\$19	\$28	\$21	3	\$23	3	\$23	13	\$22	3	\$27	_		l _	
	hour	15	\$237	\$104	\$308	\$255	_	Ψ 2 0	3	\$154	6	\$183		Ψ21				
Broadcast/atv	acre	22	\$5	\$4	\$7	\$4	8	<u> </u>	4	\$5	8	\$5						
spreading	hour	12	\$94	\$59	\$134	\$87	4	\$94	3	\$83	4	\$109						
predurig	Hour	12	φ94	၂ န၁၅	Φ104	φο1	4	φ54	3	φο3	_ 4	ФТОЭ						

								Provinci	al		Are	a 1	Aı	rea 2	Ar	ea 3	Ar	ea 4	Are	ea 5	Ar	ea 6
				20	15																	
			2015		entile	2012		2015		2015		2015		2015		2015		2015				
Custom operation	Unit	#	avg.	15th	85th	avg.	#	avg.	#	avg.	#	avg.	#	avg.	#	avg.	#	avg.				
WEED CONTROL																						
Herbicide (excludin	g herbi	cide co	st)																			
Pull-type sprayer	acre	48	\$9	\$8	\$11	\$9	17	\$10	4	\$10	17	\$8	_	_	4	\$11	4	\$9				
	hour	33	\$358	\$196	\$554	\$310	11	\$452	3	\$363	12	\$299	_	_	3	\$360	3	\$247				
Self-propelled high	acre	68	\$10	\$8	\$10	\$9	19	\$9	12	\$9	24	\$9	7	\$11	_	_	4	\$10				
clearance sprayer	hour	37	\$511	\$282	\$712	\$501	12	\$548	6	\$621	12	\$447	4	\$383	_	_	_	_				
Mechanical																						
Inter-row cultivation	acre	5	\$14		_	\$11	_	_		_			_	_	_	_	_	Γ_				
	hour	4	\$109			\$114											_					
Rotary hoe	acre	6	\$8			\$8	4	\$9														
		U	φ0			φο	4	φθ														
FERTILIZER APPLIC		4.0	40	φ0	#40	60	4.4	Φ0	4.0	Φ0	40	φ0					-	A40				
Spread dry fertilizer	acre	46	\$9	\$8	\$10	\$8	11	\$9	10	\$9	16	\$8				_	5	\$10				
	hour	25	\$282	\$126	\$425	\$232	9	\$295	4	\$336	8	\$205		_			3	\$383				
Rental of dry bulk applicator	acre	5	\$12	_		\$12	_		_	_	4	\$12					_	_				
	hour	4	\$15	_	_	\$12	_	_		_	_	_						_				
Anhydrous	acre	10	\$15	\$13	\$18	\$14	8	\$16	_	_	_	_	_	_	_	_	_	_				
	hour	7	\$212	_	_	\$184	5	\$239	_	_	_	_	_	_	_	_	_	-				
Liquid — ground	acre	18	\$10	\$9	\$11	\$9	5	\$11	4	\$11	6	\$10	_	_	_	_	_	_				
	hour	6	\$376	_	_	\$361	_	_	_	_	3	\$409	_	_	_	_	_	_				
Liquid side-dress	acre	21	\$13	\$10	\$15	\$10	10	\$13	3	\$18	3	\$11	_	_	3	\$12		_				
	hour	13	\$261	\$139	\$375	\$164	7	\$273		_					3	\$289		<u> </u>				
INSECTICIDE/FUNG			7202	7200	70.0	720.		72.0								7200						
•		11	\$10	\$8	\$11	\$10			3	\$10	5	\$8										
Early-season application	acre			ФО	фΤΤ		_		3	\$10	5	ФО						_				
	hour	5	\$426	_		\$323	_			-												
Late-season application	acre	8	\$11	\$9	\$13	\$10	4	\$12	3	\$10	_	_	_	_	_	_	_	_				
																		<u> </u>				
COMBINING																						
Corn			l .									. 1		. 1				Ι.				
With grain buggy	acre	136	\$44	\$40	\$48	\$42	39	\$43	25	\$44	48	\$44	9	\$45	11	\$47	4	\$49				
	hour	80	\$375	\$240	\$500	\$355	24	\$398	15	\$365	27	\$361	5	\$370	7	\$391						
Without grain	acre	12	\$44	\$40	\$50	\$41	4	\$41	_	_	5	\$46				_	_	_				
buggy	hour	5	\$182	_	_	\$273	_	_	_	_	3	\$197	_	_	_	_	_	_				
Soybeans																						
With grain buggy	acre	140	\$43	\$40	\$46	\$41	41	\$42	24	\$43	49	\$43	9	\$44	11	\$46	6	\$44				
	hour	80	\$504	\$313	\$720	\$467	26	\$558	13	\$499	26	\$486	4	\$380	7	\$509	4	\$392				
Without grain buggy	acre	13	\$42	\$40	\$48	\$41	5	\$38	_	_	5	\$45	_		_	_	_	_				
	hour	6	\$217			\$386	3	\$217		_	3	\$217		_	_							
Cereals										l												
With grain buggy	acre	127	\$42	\$40	\$45	\$40	31	\$42	24	\$43	51	\$41	7	\$42	9	\$46	5	\$44				
with grain buggy			-													-		<u> </u>				
Mile	hour	73	\$449	\$222	\$645	\$401	19	\$521	14	\$491	27	\$428	3	\$331	5	\$402	5	\$284				
Without grain buggy	acre	11	\$40	\$32	\$49	\$39	4	\$36		_	4	\$45				_						
оч <u>е</u>	hour	5	\$120	-	_	\$265	_	_	_	_	-	_	_	_	_	_	_	-				

Appendix A. Surve	,						Area 1		_	****			Area 4		Area 5		Area 6	
				Provinci			Are	a 1	A	rea 2	Ai	rea 3	Ai	ea 4	Ar	ea 5	Ar	ea 6
			2015		015 entile	2012		2015		2015		2015		2015		2015		2015
Custom operation	Unit	#	avg.	15th	85th	avg.	#	avg.	#	avg.	#	avg.	#	avg.	#	avg.	#	avg.
Canola																		
With grain buggy	acre	11	\$45	\$43	\$45	\$39	_	_	_	_	8	\$45		_		_	_	_
	hour	8	\$462	\$187	\$674	\$417	_	_	_	_	5	\$622		_		_	_	_
Grain buggy alone	acre	18	\$5	\$3	\$8	\$5	3	\$7	3	\$6	9	\$5	_	_	_	_	_	_
	hour	10	\$143	\$84	\$248	\$80			_	_	3	\$109		_			_	_
OTHER CROP HARV	ESTING																	
Grain swathing	acre	7	\$16			\$14	_		_		4	\$16						
	hour	10	\$83	\$57	\$95	\$98		_		_	5	\$78		_		_	4	\$71
High moisture corn			, , , ,	7 - 1	, , ,	, , ,						, , , ,						
Combined and	acre	5	\$48			\$49			3	\$49								
hauled to silo	hour	3	\$333			\$312				Ψ10				_				-
Edible beans	Houl		Ψυυυ			ΨΟΊΖ												
Bean pulling +	ooro	7	\$35			\$38	3	\$30										
windrowing +	acre			_		Φ30	3	\$30	_	_	_						_	\vdash
	hour	3	\$392							_		_		_		_		<u> </u>
Combining — conventional grain	acre	14	\$44	\$42	\$46	\$42	4	\$45	_	_	10	\$44				_		<u> </u>
type	hour	5	\$449	_	_	\$389	_	-	_	_	4	\$449	_	_	_	_	_	-
Combining — specialty — Bob/ Lilliston	acre	7	\$51	_	_	\$58	3	\$50	_	_	_	_	_	_	_	_	_	
TRUCKING																		
Grains and	bu.	6	\$0.16		_	\$0.17	6	\$0.16	_	_			_	_	_			
oilseeds	mt.	66	\$9	\$6	\$11	\$8	11	\$7	17	\$9	27	\$8	6	\$14	3	\$10	_	_
FORAGE HARVESTII	NG							· ·								· ·		1
Hay																		
Swathing/	acre	43	\$18	\$15	\$20	\$17	7	\$19	4	\$19	21	\$17	5	\$19	3	\$18	3	\$16
conditioning	hour	40	\$154	\$80	\$205	\$124	7	\$164	3	\$161	18	\$151	3	\$153	3	\$245	6	\$101
Raking	acre	33	\$9	\$6	\$13	\$8	4	\$7	 5	\$9	17	\$8	4	\$10			_	-
6	hour	28	\$109	\$48	\$150	\$77	4	\$104	4	\$148	13	\$96	3	\$75				_
Tedding	acre	10	\$10	\$6	\$14	\$8	3	\$7		Ψ1-10	3	\$13	3	\$10				
rodding	hour	13	\$107	\$48	\$163	\$98	3	\$108		_	5	\$131		— —				-
Bale — sm. square	bale	6	\$0.91	ΨΨΟ	Ψ105	\$0.94		Ψ100			3							
(ground)	Dale	0	Φ0.91		_	Φ0.94				_	י	φυ.ου	_					
Bale — sm. square (loaded)	bale	20	\$0.80	\$0.50	\$1.00	\$0.87	3	\$0.83	3	\$0.77	11	\$0.70	_	_	_	_	_	_
Bale — Ig. square	ft.	24	\$1.27	\$1.14	\$1.40	\$1.23	_		4	\$1.30	11	\$1.25	_	_	5	\$1.28	_	
Bale — Ig. round under 1,000 lb	bale	29	\$8	\$7	\$9	\$8	4	\$8	4	\$8	15	\$7	3	\$11	3	\$9		
Bale — Ig. round over 1,000 lb	bale	14	\$8	\$6	\$9	\$8	_	_		_	7	\$7		_		_	3	\$8
Entire operation (mowing to baling)	lg. bale	3	\$14	_	_	\$17	_	_	_	_	_	_		_	_	_	_	_

		Provincial			ial		Are	a 1	Area 2		Area 3		Area 4		Area 5		Aı	rea 6
			2015)15 entile	2012		2015		2015		2015		2015		2015		2015
Custom operation	Unit	#	avg.	15th	85th	avg.	#	avg.	#	avg.	#	avg.	#	avg.	#	avg.	#	avg.
Bale wrapping																		
Individual — with plastic	bale	4	\$9	_	_	\$9	_	_	_	_	_	_	_	_	_	_	_	_
Tube	bale	10	\$5	\$3	\$7	\$6	_	_	_	_	5	\$5	3	\$5	_	_	_	_
Straw	•																	•
Bale — Ig. square	ft	4	\$1.30	_	_	\$1.28	_	_	_	_	_	_	_	_	_	_	_	_
Bale — Ig. round	bale	4	\$8	_	_	\$8	_		_	_	3	\$7	_	_	_	_	_	_
Haylage																		,
PTO harvester																		
Field chopping only	hour	3	\$163	_	_	\$309	_	_	_	_		_	_	_	_	_	_	_
Chop, haul, pack, blow	hour	6	\$222	_	_	\$207	3	\$238	_	_	3	\$205	_	_	_	_	_	_
Self-propelled harve	ster														1		!	
Field chopping only	hour	7	\$395	_	_	\$395	_	_	_	_	4	\$439	_	_	_	_	3	\$337
Chop, haul, pack, blow	hour	8	\$639	\$526	\$748	\$404	_		_	_	5	\$660	_	_	_	_	_	-
Corn silage																		
PTO harvester																		
Field chopping only	hour	7	\$198	_	_	\$226	_	_	_	_	3	\$175	_	_	_	_	_	_
Chop, haul, pack, blow	hour	8	\$314	\$203	\$349	\$221	3	\$213	_	_	4	\$314	_	_	_	_	_	_
Self-propelled harve	ster wi	th kern	el proce	essor														•
Field chopping only	hour	5	\$433	_	_	\$418	_			_	3	\$418	_	_	_	_	_	_
Chop, haul, pack,	acre	3	\$110	_	_	\$86	_	_	_	_		_	_	_	_	_	_	_
blow	hour	8	\$696	\$531	\$891	\$493	_		_	_	4	\$828	_	_	_	_	_	_
MANURE HANDLING	3		,															
Solid																		
Loader only	hour	17	\$74	\$52	\$98	\$71	3	\$68	_	_	7	\$64	_	_	_	_	4	\$90
Spreader only	hour	13	\$111	\$79	\$152	\$93	_	_	_	_	6	\$131	_	_	_	_	3	\$117
Loader and spreader	hour	15	\$136	\$75	\$175	\$144	_		_	_	6	\$158	3	\$130	_	_	_	_
Liquid																		
Drag hose boom applicator per 1,000) gal	12	\$11	\$10	\$12	\$12			_		6	\$11	_	_	_		3	\$10
Tanker — surface ap only per 1,000 gal	oplied	3	\$9	_	_	\$20	_	_	_	_	_	_	_	_	_	_	_	_
Tanker — surface ap only per hour	oplied	14	\$165	\$90	\$193	\$141	_		_	_	10	\$164	_	_	_	_	_	
Truck Transfer	hour	4	\$153	_	_		_	_		_		_		_		_		
MISCELLANEOUS																		
Snow removal — blade	hour	16	\$93	\$71	\$120	\$93	4	\$79		_	6	\$93				_		
Snow blowing	hour	54	\$100	\$68	\$150	\$97	8	\$89	4	\$104	30	\$105	3	\$103	5	\$85	4	\$100

			Provincial					ea 1	Aı	ea 2	Area 3		Area 4		Area 5		Area 6	
			2015	20 : Perce		2012		2015		2015		2015		2015		2015		2015
CUSTOM OPERATION	Unit	#	avg	15th	85th	avg.	#	avg.	#	avg.	#	avg.	#	avg.	#	avg.	#	avg.
TRACTOR RENTALS																		
Custom operator	hour	6	\$46	_	_	\$54	_	_	_	_	3	\$55	_	_	_	_	_	_
			1				i e	i e		i	İ	\$0.34			İ			

Appendix C. Iron solutions' Eastern Canada Wir	ter Guide suggested rates						
Equipment	Unit	2015	2012				
Utility under 100 hp without cab	hp/h	\$0.27	\$0.24				
Utility with cab and 2WD	hp/h	\$0.29	\$0.26				
Utility with cab and MFWD	hp/h	\$0.31	\$0.29				
Rowcrop with cab and 2WD	hp/h	\$0.29	\$0.29				
Rowcrop with cab and MFWD	hp/h	\$0.31	\$0.31				
4-wheel drive with duals	hp/h	\$0.31	\$0.31				
Tractor Option Charges:							
Loader	hp/h	\$0.05	\$0.06				
·							



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