

FARM BUSINESS FACT SHEET

Should I own a truck?



KEY POINTS

- Careful analysis is recommended before committing to owning a truck
- When looking at a major plant purchase, such as a truck, review it in conjunction with the goals and objectives of the entire business
- Know the cost differential between owning a truck and using a contractor
- Owning a truck enables the delivery of commodities direct to an end user at a time that is mutually convenient to both parties
- Harvest logistics can improve when a grain-growing business owns a truck
- Owning a truck provides the opportunity for effective labour use in the farm's off-peak times
- Owning a truck and delivering grain can help cover labour costs by converting an existing cost (freight paid to others) into an income for the farm

Trucks in a paddock.

INTRODUCTION

Grain growers are often tempted to own their own truck as a convenience. The question of whether to own a truck is complex and such a decision should be made with an understanding of the economics and other influencing factors. This fact sheet outlines a process to help make that decision.

MANAGING HARVESTED GRAIN

Grain growers have many options to manage grain as it is harvested. These include:

- sell ex-paddock;
- store in the paddock for sale during the year;
- own your own truck and deliver direct to the local bulk-handling facility, end user or port;

- own your own truck and deliver to central on-farm storage for sale ex-farm during the year;
- own your own truck and deliver to central on-farm storage for sale delivered direct to end user during the year;
- employ a contractor to pick up from the paddock and deliver direct to the local bulk-handling site, end user or port; and
- a combination of the options above.

ECONOMICS AND THE 'OTHER USE' OPTIONS

When contemplating the purchase of a truck the farm business needs to clearly identify what it will be used for and whether there are additional opportunities that arise through owning it. It helps to document the tasks you envisage the truck will be completing; for example, harvest cartage, shifting grain throughout the

season, filling the seeder at cropping, drop deck trailers for hay, a crate for stock, etc.

A major plant purchase, such as a truck, needs to be reviewed in conjunction with the goals and objectives of the entire business. ORM farm data and benchmarks indicate that for a consolidated business (Victoria Wimmera–Mallee):

- Total value of plant and machinery should approximately equal gross annual income for a business (averaged over a five-year period).
- Over five years, a business should invest an average 10% to 12% of gross income per year on machinery capital purchases.

Before making a major machinery or truck purchase, check your farm business against these benchmarks.

To assist with the decision to purchase a truck or use freight contractors, the following steps are recommended:

- 1 Collate a list of the potential uses of a truck as explained above.
- 2 Estimate the amount of time it will be used and the distance it will travel per year.
- 3 Assess the financial costs/benefits. This will establish:
 - if it is economically viable to own a truck;
 - the type of truck required; and
 - how much it will be used.
- 4 Document the cost of employing a freight contractor to complete the listed tasks.
- 5 Compare the full cost of purchasing a truck versus using a freight contractor.

HARVEST LOGISTICS

To make harvest as efficient as possible, header capacity needs to be maximised. Storing grain in the paddock or carting it to a central on-farm storage facility will usually be faster than delivering to the local bulk-handling facility or end user, therefore making harvest more efficient and deferring the task of shifting the grain off-farm to post harvest.

Other factors to consider:

- The availability of freight contractors when needed.
- The standard of contractors (for example timeliness, professionalism, hygiene, and so on) needs to be acceptable to the farm business.
- The business will need to manage the task of sourcing contractors.



- If the decision is made to purchase a truck, the business will need to source a competent and willing driver with suitable qualifications and work history.
- Owning a truck allows the business flexibility to do extra internal freight, such as shifting grain on-farm, at any time.
- Owning a truck can assist you to develop a relationship with end users.
- To deliver throughout the year requires appropriate capacity of on-farm storage.
- Owning a truck and delivering direct to port enables a business to value-add and capture the freight cost from the local bulk-handling site to port within the business to help cover the additional labour costs.
- Delivering direct to the port can present opportunities to back-load fertiliser and other farm inputs.
- Many farms require extra labour for seeding and harvest. A labour unit could be used to drive a farm-owned truck delivering grain when not busy with seeding and harvest.
- Assess if the business would be better off with a lower value 'farm truck' to cart on-farm and use a contractor to deliver off-farm throughout the year.
- A farm truck could be used to carry fertilisers for spreading operations and water and chemicals for spraying operations.
- Number of farms and proximity of one farm to another for moving farm inputs, machines and livestock.
- As an alternative to owning a truck, would it be less complex to load directly into grain bags in the paddock, then sell throughout the year ex-paddock?
- What is the variability in the annual freight task? In a good season you may want to use a combination of your own vehicle and a contractor, but in a normal season you might only use your own vehicle.

GRAIN GROWER CASE STUDY

The costs and income of running a truck. Calculating the 'break-even loaded km/year'

Grower A owns 4000 hectares on a four-year canola/wheat/barley/legume rotation. The farm is in the Victorian Northern Wimmera region and cereals average 2.4 tonnes per hectare. Average production is 4700 tonnes of cereal, 1300 tonnes of oilseed and 600 tonnes of legumes.

After deducting tonnage for seed and livestock feed the business has approximately 6350 tonnes of grain to sell. A truck is also needed to cart gypsum or lime (allow 23 loads or 1000 tonnes per year). This would equate to a total of 170 loads (average 44-tonne B-double) or 34 weeks' work if delivering five loads a week.

From an employment perspective, a full-time labour unit would be employed 34 weeks a year delivering grain, six weeks for cropping, six weeks for harvest, four weeks for annual leave and two weeks for maintenance (total of 52 weeks).

Cost of ownership

Calculating how many loaded kilometres is required to assess if the truck will be economically viable.

Assume the case study farm delivers 170 loads per year at an average of 300 kilometres to the chosen destination. This destination may be a port or end user rather than the closest grain delivery point available during harvest. This equates to 51,000km loaded per year or 102,000km total per year.

TABLE 1 Estimated truck running expenses for a low, medium and high capital investment in a truck.

Capital investment		Low	Medium	High	Medium capital investment		
		\$100,000	\$300,000	\$600,000	% of total cost		
EXPENSES PER YEAR TRAVELLING 102,000KM PER YEAR (50% LOADED)							
OVERHEADS					5%		
Insurance	% capital	1%		\$1000	\$3000	\$6000	
Phone	Per year			\$600	\$600	\$600	
Rego (primary prod)	Per year			\$5000	\$5000	\$5000	
Admin, 2 hrs per week	38 weeks	\$25/hr		\$1900	\$1900	\$1900	
FUEL					38%		
Fuel use	km/L, 102,000km	1.6					
Price	\$/L	\$1.50	\$95,621				
	Less on-road rebate	\$0.12	\$7650	\$87,972	\$87,972	\$87,972	
Fuel	\$ per km			\$0.86	\$0.86	\$0.86	
REPAIRS					13%		
R&M and tyres	Total \$			\$40,798	\$30,599	\$20,399	
Price	\$ per km			\$0.40	\$0.30	\$0.20	
LABOUR					25%		
Wages/\$ per week	38 weeks	\$1500/week		\$57,000	\$57,000	\$57,000	
FINANCE					20%		
Depreciation	% capital cost	10%		\$10,000	\$30,000	\$60,000	
Interest	Opportunity cost	5%		\$5000	\$15,000	\$30,000	
TOTAL EXPENSES				\$209,270	\$231,070	\$268,871	

SOURCE: ORM

Key assumptions (Table 1)

- Truck travels 1.6km per litre at \$1.50 per litre (less on-road rebate of 12c per litre). For simplicity, fuel use is modelled to be equal for different capital investments, repairs and maintenance (R&M) has been adjusted.
- For a medium investment, R&M and tyres are \$0.30 per km (note: R&M is \$0.40 per km for low capital, \$0.30 for medium and \$0.20 for high capital investment trucks), that is, newer trucks have fewer repairs.
- Labour allowance is 38 weeks at \$1500 per week. (Reference: Road transport, long distance award, Grade 6 and assume 45 hrs/week average.)
- Capital value of prime mover and B-double trailers is \$100,000, \$300,000 and \$600,000 (for low, medium and high capital investment) averaged over five years.

TABLE 2 Calculating total per kilometre loaded cost to compare with freight contracting rates.

a	b	c	d	e
		Level of capital investment		
		Low	Medium	High
Capital investment		\$100,000	\$300,000	\$600,000
Fixed costs per year		\$80,500	\$112,500	\$160,500
Fuel and repairs per km		\$1.26	\$1.16	\$1.06
\$ per km loaded	\$/tonne 300km	Km loaded per year		
4.20	28.64	48,060	60,000	77,349
4.50	30.68	40,759	51,724	67,579
4.80	32.73	35,385	45,455	60,000
5.10	34.77	31,262	40,541	53,950
5.40	36.82	28,000	36,585	49,008

Notes to Table 2:

SOURCE: ORM

- Fixed costs. Refer to overheads, labour and finance in Table 1.
- Fuel and repairs per kilometre from Table 1. Divided by total kilometres per year (assume 50% of total kilometres are loaded).

Break-even loaded kilometres

Calculating how many loaded kilometres you would need to complete per year to be more economic than employing a contractor is illustrated in Table 2. To calculate break-even loaded kilometres:

- Select your level of capital investment, (column (c), (d) or (e)).
- Follow down to the nearest kilometres loaded per year your truck travels.
- Follow this line across to the figure in column (a) and this tells you the cost

per loaded kilometre to operate your truck.

Alternatively, if you know the contract rate per kilometre (column (a)) and you know the cost per kilometre to operate your truck (column (c), (d) or (e)), you can then intersect these two columns in Table 2 to identify how many loaded kilometres you need to travel per year to equal contract rates.

Based on the assumptions in the case study, owning a truck of medium (that is, \$300,000) capital investment and travelling 50,000 loaded kilometres per year would be similar to employing a contractor at \$4.50 per kilometre. A high capital investment (new truck and trailers) would need to complete 67,500km loaded annually to be more economical than employing contractors at \$4.50 per kilometre loaded.

Add to this any extra income that could be attributed to the truck due to:

- price premiums as product is delivered direct to the end user;
- taking advantage of post-harvest price increases;
- improved logistics management and flexibility at harvest and during the year; and
- an additional labour unit available for cropping and harvest.

Should a business decide to purchase a truck of different value to the case study this will influence final profits. (Every \$100,000 difference in capital investment is an extra \$10,000 annual depreciation, which directly affects profit.)

PHOTO: SHUTTERSTOCK



CONCLUSION

- Document and assess potential use and tonnages to be carted to assist with a decision about if and what type of truck may fit your needs.
- To be similar to grain freight contract rates of \$4.50 per km, a B-double truck worth approximately \$300,000 needs to travel approximately 50,000km per year loaded.
- Financials, lifestyle and resourcing all need to be considered when making the decision.
- Carefully weigh up other, non-economic factors such as employment of a driver and waiting for a contractor.
- All machinery purchases should fit the whole farm production and labour plan.

ADDITIONAL RESOURCES

FACT SHEETS

Machinery investment and costs:

www.grdc.com.au/FS-MachineryInvestmentAndCosts

Put a policy around machinery purchases:

www.grdc.com.au/GRDC-FS-PolicyAroundMachineryPurchases

Investment in harvest machinery:

<https://grdc.com.au/FS-MachineryInvestment>

Investment in a sprayer – guidelines to assist investment decisions:

<https://grdc.com.au/investing-in-a-sprayer-guidelines-to-assist-the-decisions>

Cost effective investment in machinery:

<https://grdc.com.au/InvestmentInMachinery>

MORE INFORMATION

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GRDC PROJECT CODE

ORM00015

Content prepared and edited by ORM Pty Ltd on behalf of GRDC.

This Fact Sheet is produced as part of GRDC's Farm Business Management initiative.

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