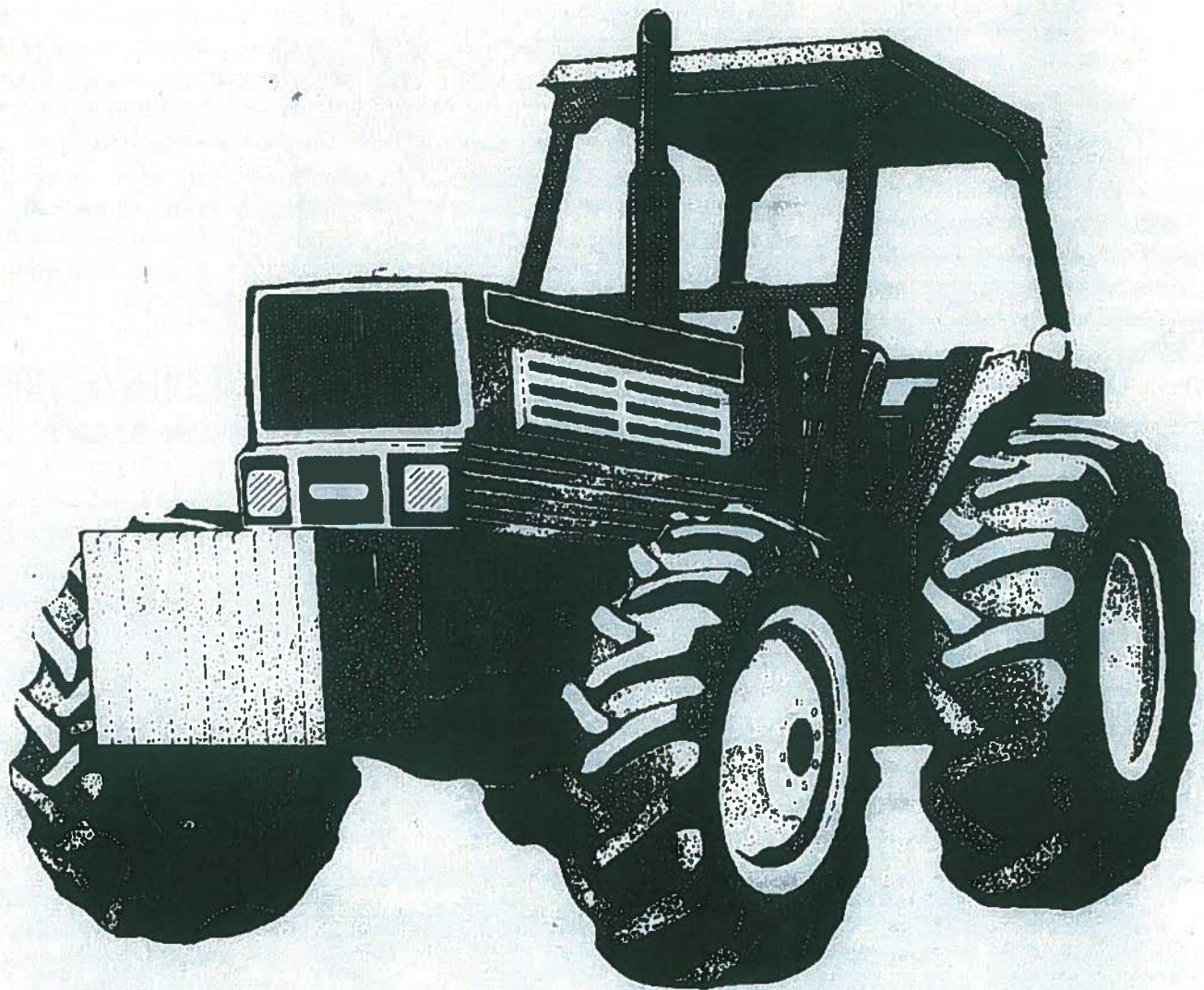


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# How To Buy A Tractor



Hints on what you need to know before purchasing a tractor.

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# What You Need To Know Before Purchasing A Tractor.

## What Size Tractor Do You Really Need?

*Working with a tractor is a matter of time versus size.*

One of the most important decisions about buying a tractor is selecting the right size tractor to fit your needs. A smaller tractor can do virtually everything that a much larger tractor can do — it will just take longer. With a smaller tractor you will have to till or disc with a smaller implement and possibly make more passes. If you have a loader, you will have to work with smaller loads.

But with extra time, the work can be performed just as if it had been done with a larger, more expensive tractor. In certain agricultural applications smaller tractors are even preferable to larger tractors because they cause less soil compaction and have a smaller turning radius.

Another way of making this same comparison is that working with a tractor is a matter of time versus cost. Larger tractors cost more than smaller tractors. They cost more to purchase, they cost more to operate, and they cost more to maintain. However, smaller tractors are not always an option. For many seasonal agricultural applications a large tractor is necessary because certain operations, like discing, must be performed within a limited time frame. The cost of the larger tractor becomes secondary to the time required to perform the work.

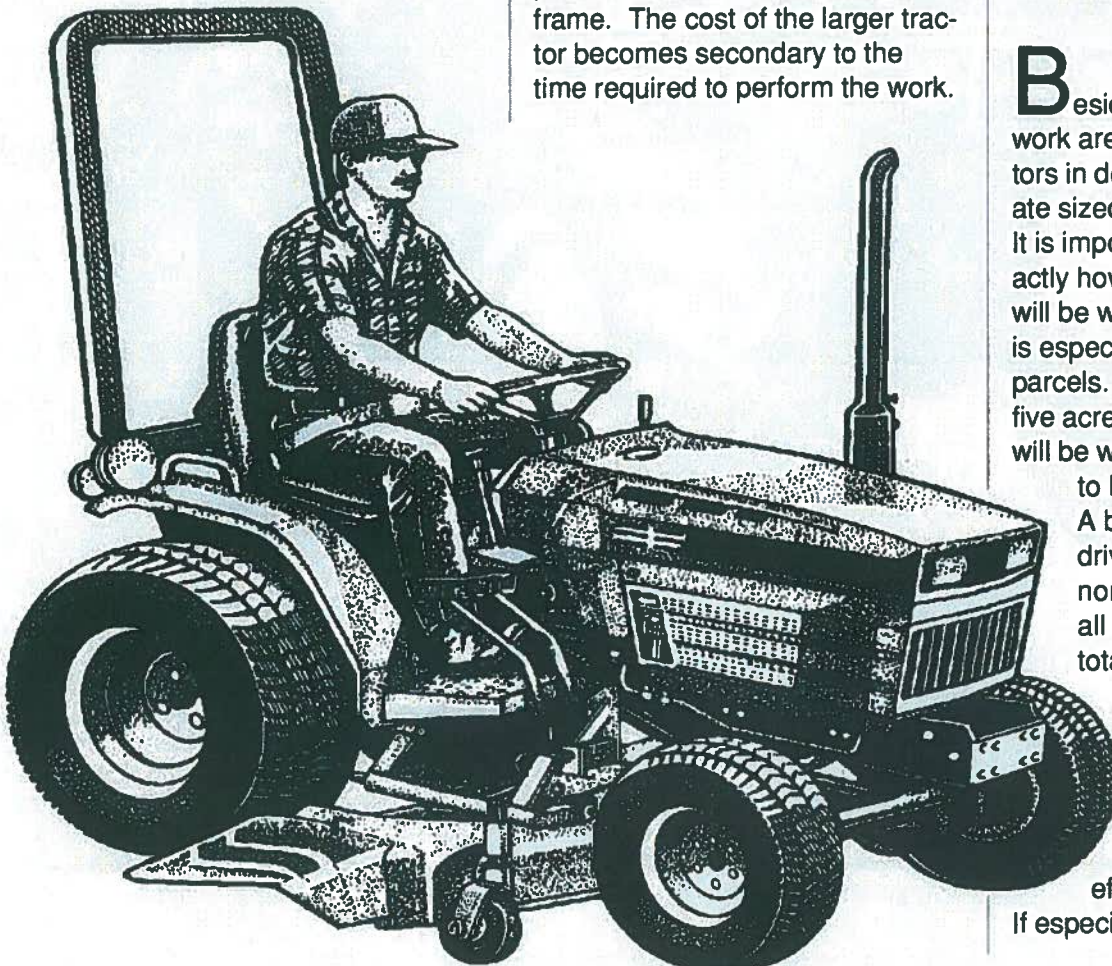
For this type of agricultural use, more time simply isn't an option.

The opposite time versus cost decision is likely to be true for a property owner with just a few acres to maintain. For this type of user, a smaller tractor probably makes more sense. In this instance, the time that a job takes is probably less important than the cost to purchase and maintain the tractor. Another issue for the property owner is maneuverability. When you're working just a few acres, a smaller tractor is more practical — especially with respect to the turning radius. Limited acreage means a lot of turning and a lot of close work along property lines.

## What Size Is The Work Area?

Besides time, the size of the work area is one of the main factors in determining the appropriate sized tractor for your needs. It is important to distinguish exactly how much of your property will be worked by tractor — this is especially important for smaller parcels. For instance if you own five acres, the actual amount that will be worked by tractor is likely to be substantially less. A building (house or barn), driveway, lawn and other non-workable areas should all be deducted from the total acreage to determine the true work area.

When determining the actual work area, also look for any special considerations that might effect your requirements. If especially tight maneuvering is





spend the most time on, or the job that you do most often may not be the most important reason for purchasing the tractor. For instance if you buy a tractor to raise hay, you may well spend most of your time hauling hay with the tractor. However, the most important job is more likely to be plowing and planting. It is these jobs that you must consider when picking the right tractor — not the less demanding job of hauling.

## Two-Wheel Drive or Four-Wheel Drive?

In virtually every application, the primary function of a tractor is to transmit energy to the ground through the tractor's wheels. Even on very hard surfaces, a tractor's wheels will slip a certain amount — reducing the amount of energy applied to the task being performed. Soft ground, heavy loads, hills, and wet conditions all increase the amount of slippage, and make the tractor less efficient.

In general, four-wheel drive tractors are more efficient than two-wheel drive tractors because they

## What Will The Tractor Be Used For?

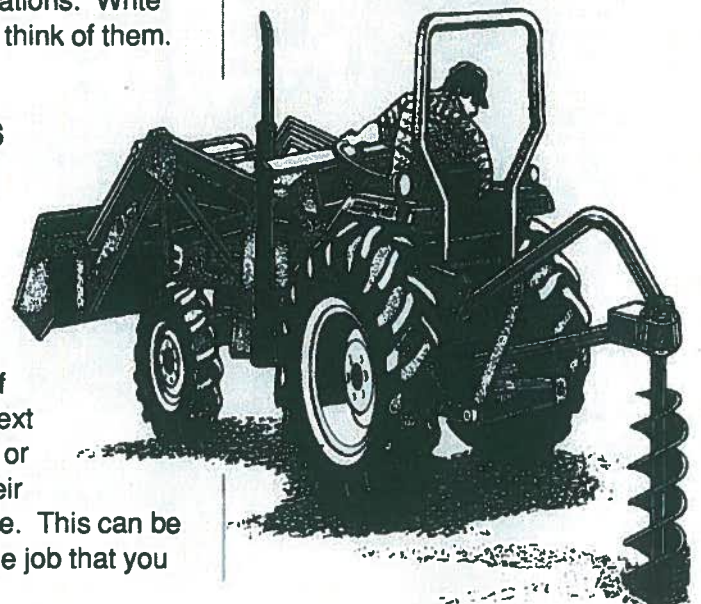
required, don't consider a tractor with a turning radius that is too big. Take into consideration the height of any buildings, such as a barn or shop, that might limit the tractor's access. Consider the height of any trees or obstacles that you must work around. If a tractor is too tall it will have to be driven around trees and overhanging obstacles. Among other problems, this will make tilling very difficult, and result in sloppy work.

The type of terrain on which you will operate a tractor is also very important to the selection process. If there are hills, you may need a low profile tractor. A tall or narrow gauge tractor can be extremely dangerous to operate on hilly terrain. A tractor that is not matched to your requirements will be difficult or impossible to operate, more expensive (initially and/or in the long-run), and will likely add to rather than reduce your work load.

After you have an idea of the amount of area you will be working and any special requirements, the next step is to determine what you will actually be doing with your tractor. Tractors are so versatile that you will probably continue to think of ways to use a tractor long after you have made your purchase decision. But at this point, you need to think of all of the major applications. Write them down as you think of them.

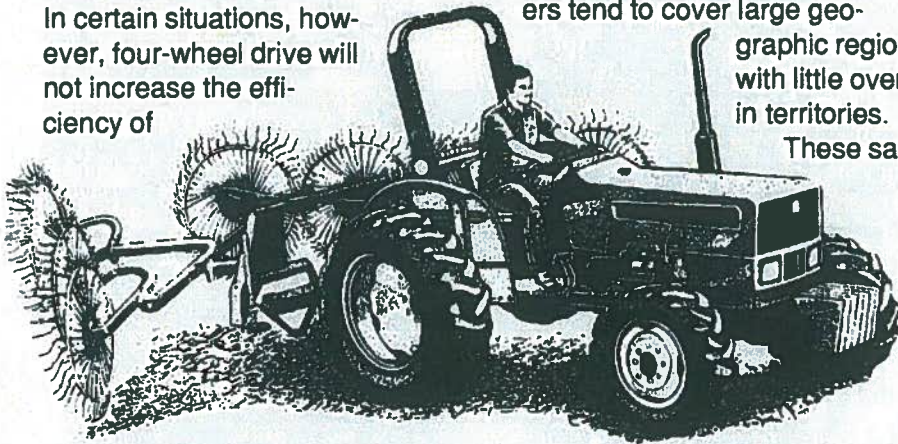
## Which Jobs Are Most Important?

Once you have made a list of applications, the next step is to prioritize or rank the jobs in their order of importance. This can be a bit tricky since the job that you



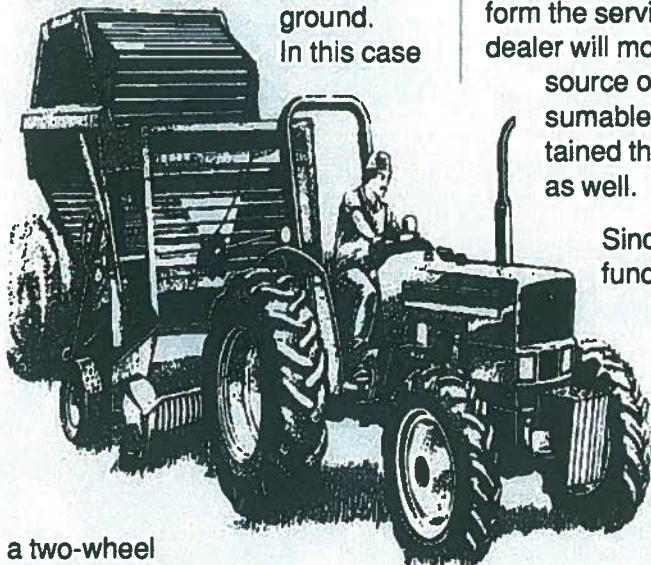
reduce the amount of wheel slippage — increasing the amount of energy transmitted to the ground. This is especially true for smaller, lighter tractors (particularly those under 25 horsepower) which experience more wheel slippage under heavy loads. In this sense, four-wheel drive allows you to get more work done with a smaller tractor.

In certain situations, however, four-wheel drive will not increase the efficiency of



a tractor. When a tractor is used as a tow vehicle on flat, dry terrain four-wheel drive will not increase the tractor's efficiency by any appreciable amount. An example of this type of application is a tractor that is primarily used to pull a spray rig or trailer on flat ground.

In this case



a two-wheel drive tractor is suitable, and will have a slightly lower purchase price.

## Dealer Service And Support.

**W**hether you are a property owner with just a few acres or a major agricultural user, the ability of a dealer to service and support your tractor is a critical factor in the purchasing decision. Unlike automotive dealers, tractor dealers tend to cover large geographic regions with little overlap in territories.

These same

dealers are frequently the only authorized dealer and source of tractor parts for the brand(s) of tractor that they sell. As a result, buying parts and obtaining service usually means going back to the dealer who sold you the tractor. Even if you perform the service yourself the dealer will most likely be your only source of parts. Some consumables will have to be obtained through your dealer as well.

Since tractors have a functional life of thirty years or more, it is important to make sure that the dealer you buy your tractor from is going to provide you with quality service. Before

you buy a tractor you will want to check all of the following items.

Is the dealer open at convenient times? If the dealer is only open on weekdays and you are a weekend user, it may be very difficult to arrange for service, or to buy parts.

Does the dealer stock a large supply of parts for your tractor? Especially in agricultural applications, tractor work must be performed during a limited time frame. If needed parts must be ordered, the tractor may not be usable when it is needed most.

Does the dealer perform service himself? Virtually any reputable dealer should have his own service department. And don't take a dealer's word for the quality of his service. Walk through the service department yourself. If the equipment is outdated or in poor shape, look elsewhere.

Are the service people factory trained? A tractor is an expensive, highly specialized vehicle in which you will make a substantial investment. Make sure that the service department personnel are adequately trained and equipped to maintain your tractor.

Does the dealer have field service trucks and/or transportation capability to haul tractors back to his shop. Hauling a tractor in for service is not an easy task.



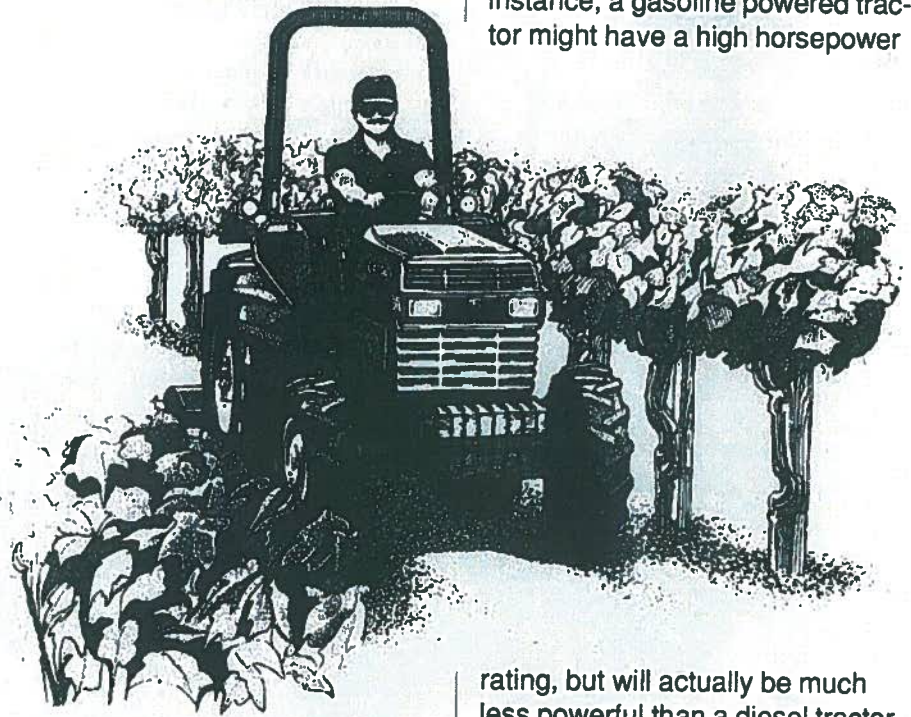
Make sure that the dealer has the most appropriate service system for your needs.

## The Warranty.

**T**he two most important considerations for warranty coverage are the length of coverage (both calendar months and time of operation) and the actual equipment which is covered. As with most vehicle warranties, coverage is usually based on a certain amount of calendar months after the purchase or the number of hours of operation.

If you will only use your tractor occasionally the calendar months of coverage are likely to be more important; however, under commercial use the opposite is likely to be true. Make sure to compare the warranty expiration condition that affects you. When comparing the actual components covered, consider the costs associated with replacing items not covered by the warranty. Ideally the warranty should cover all of the components on the tractor except for consumables.

## Comparing Tractor Performance.



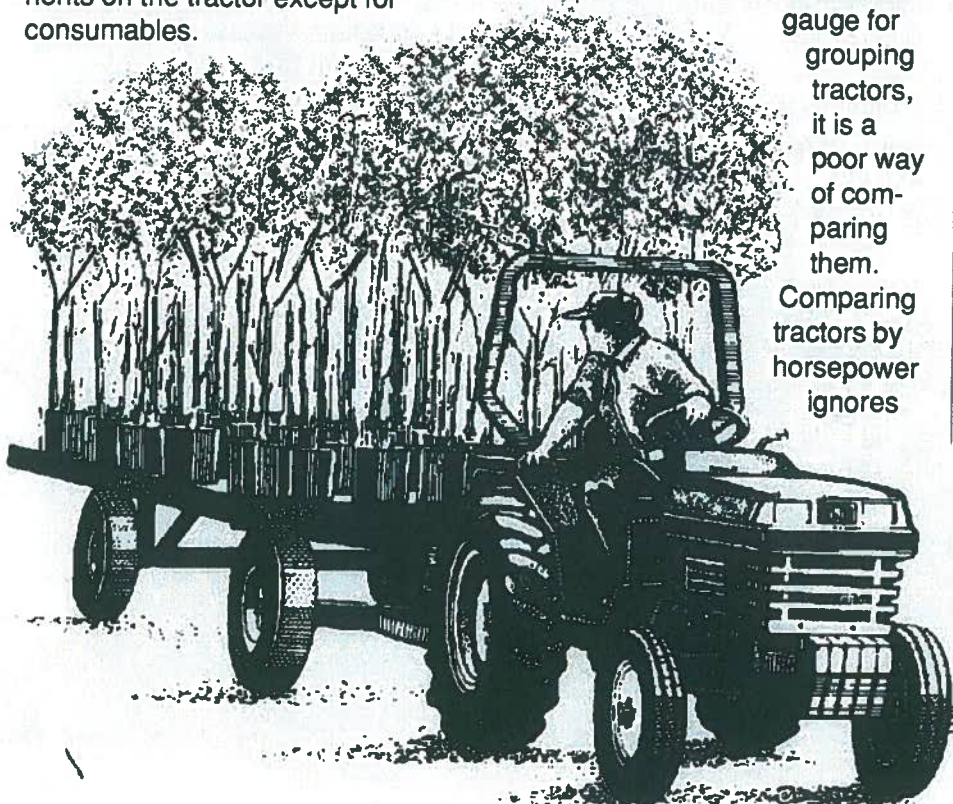
many factors which are potentially more important. Horsepower ratings can also be deceptive. For instance, a gasoline powered tractor might have a high horsepower

**T**ractor performance involves many factors. The most common way of comparing tractors is by horsepower ratings. While horsepower is a broad gauge for grouping tractors, it is a poor way of comparing them.

Comparing tractors by horsepower ignores

rating, but will actually be much less powerful than a diesel tractor with a lower horsepower rating.

When considering tractor performance, you must also include both tangible and intangible features. Tangible features include such things as: turning radius, PTO output, hydraulic system speed, and a number of other performance specifications. Less tangible considerations include ease of service, the ease with which the tractor can be operated, and the quality of construction. Another way to rate the tractor you are considering is to ask current owners their opinion on the overall performance and service that they've experienced. The opinion of experienced owners can be especially important when comparing the performance of different tractor brands. Other tractor owners may also be able to answer questions about particular tractors, or answer questions that product brochures and information do not address.

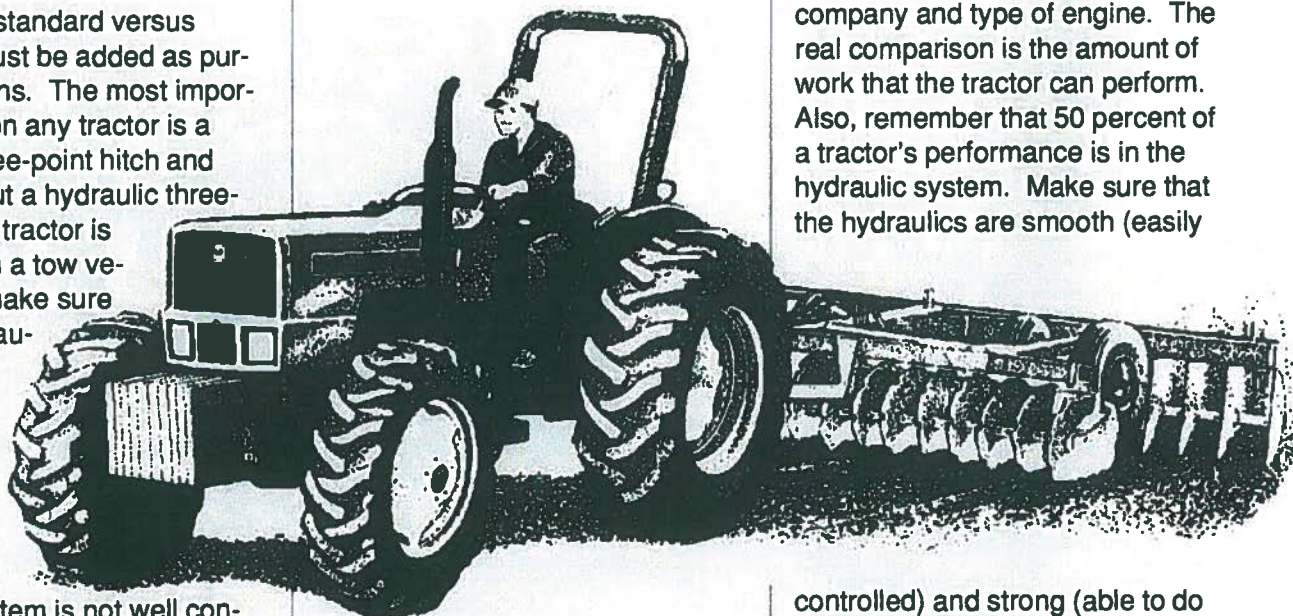


## What About Features And Options?

It is important to look at which features are standard versus those that must be added as purchased options. The most important feature on any tractor is a hydraulic three-point hitch and PTO. Without a hydraulic three-point hitch, a tractor is no more than a tow vehicle. Also make sure that the hydraulic system is integrated into the design of the tractor, not a bolt-on option. If the hydraulic system is not well constructed, you will almost certainly be disappointed with the tractor.

When comparing tractors, make sure that the features offered on one are also offered on the other tractor(s) that you are considering. Some items, such as front-end weights, may be considered standard on some tractors, but will have to be purchased separately for others. Varying levels of options on a tractor can significantly effect the price. Make sure when comparing tractors by purchase price that the same equipment is included on each. If an item or implement is included on one tractor but not another, find out why.

## And Then There's The Cost.



Ultimately your tractor purchase decision will come down to the cost. Even here, however, there are things that must be considered. First make sure that you are looking at a tractor that will fulfill your needs. "Department Store" tractors may have a low purchase price and high horsepower ratings, but poor construction and gas-powered aluminum engines make them unsuitable for serious

duty-cycle work. Also make sure that the tractor has a hydraulic three-point hitch and PTO.

Next, make sure that you are comparing like tractors. Remember that horsepower ratings vary by company and type of engine. The real comparison is the amount of work that the tractor can perform. Also, remember that 50 percent of a tractor's performance is in the hydraulic system. Make sure that the hydraulics are smooth (easily

controlled) and strong (able to do the work). Little things (e.g. front-end weights) can make a big difference in the final price you receive from the dealer.

And, don't forget the warranty and after sale service. When comparing warranties consider the length of coverage, what is covered, who will perform the service, and where it will be performed. Look for a dealer with a quality service department (go look at it yourself) and factory trained mechanics. If the dealer doesn't do the service himself, or if the service department is outdated or in poor shape, you certainly want to look elsewhere.

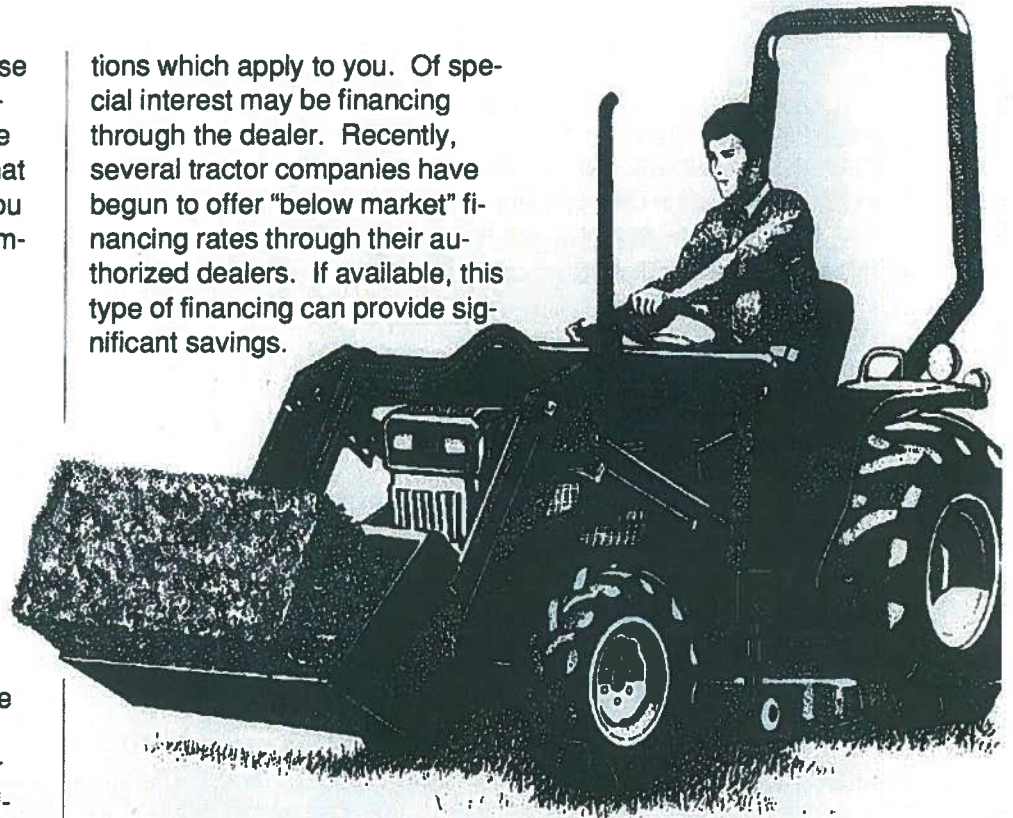


Finally, talk to other owners. Use references that the dealers provide, and find your own. People who already own the tractors that you are considering can give you the most candid and accurate impression of their performance.

## Financing Your Purchase.

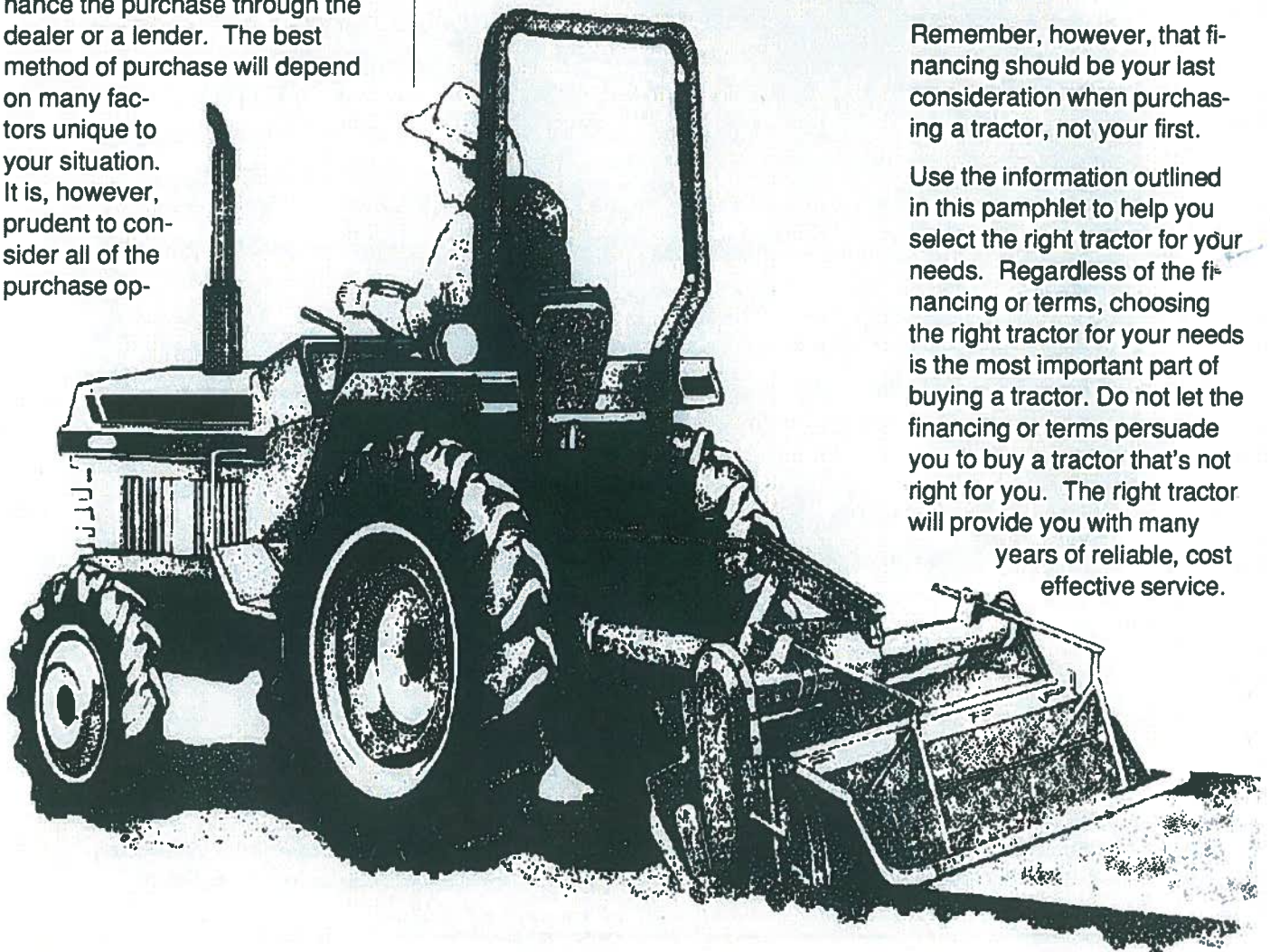
Once you have decided to buy a tractor and have narrowed your choice to two or three options, the last consideration is how the purchase will be made. The three main options are: purchase for cash, lease or lease with an option to buy, or finance the purchase through the dealer or a lender. The best method of purchase will depend on many factors unique to your situation. It is, however, prudent to consider all of the purchase op-

tions which apply to you. Of special interest may be financing through the dealer. Recently, several tractor companies have begun to offer "below market" financing rates through their authorized dealers. If available, this type of financing can provide significant savings.



Remember, however, that financing should be your last consideration when purchasing a tractor, not your first.

Use the information outlined in this pamphlet to help you select the right tractor for your needs. Regardless of the financing or terms, choosing the right tractor for your needs is the most important part of buying a tractor. Do not let the financing or terms persuade you to buy a tractor that's not right for you. The right tractor will provide you with many years of reliable, cost effective service.



# Work Safely.

A tractor is a very powerful tool which deserves your respect and the respect of everyone nearby. You should understand the capabilities and limitation of your tractor before you begin operation. Start by reading your Owner's Manual and becoming familiar with your tractor. The following list of Safety Tips will provide some tips to safe operation; however, careful and thoughtful operation is your best insurance against an accident.

## Safety Tips

- Know your equipment and its limitations.
- Pay special attention to the warning and caution labels on your tractor.
- Securely fasten your seat belt if the tractor has a Roll-Over Protection System (ROPS). Do not use a seat belt if it does not have a ROPS.
- Reduce speed when turning, crossing slopes, on rough terrain, or on slick/muddy surfaces.
- Do not let any passengers ride on the tractor. The operator should remain in the seat at all times when the tractor is being operated.
- Do not let bystanders around or near the tractor during operation.
- Before allowing other people to use your tractor, explain its operations and have them read the tractor manual.
- Stay away from ditches, embankments, holes, logs, stumps, large rocks, hay bales, and other large obstacles. Any of these obstacles can cause a tractor to upset or turn-over.
- Stay off of hills and slopes that are too steep for the safe operation of your tractor.
- Keep the PTO shielding in place at all times. Turn off the PTO and engine before unclogging, adjusting, or servicing the equipment.
- Hitch loads only to the draw bar or hitch points recommended by the tractor manufacturer.
- When stopped, shift to neutral or park, and firmly set the brakes. Take the ignition key when you leave the tractor.
- Always stop the engine before refueling.
- When using a heavy implement, be sure to fit the tractor with the prescribed front weights.
- When traveling on public roads, observe all traffic regulations, as well as common sense. Be sure to interlock the two brake pedals. Uneven braking may cause sudden swerves or the tractor to tip over.
- When climbing a slope or going over a bank with an implement on the tractor, lower the implement to prevent the tractor from heading up (lifting the front wheels off of the ground).
- Never drive a tractor when you are drunk, sleepy, sick, or on medication.

## Two Terms You Should Know

- **PTO (Power Take Off)**  
A drive shaft which connects from the tractor to an implement. This shaft, driven by power from the tractor, powers implements attached to the back of the tractor.
- **3-Point Hitch (Hydraulic)**  
The rear lifting system of a tractor, consisting of two lower links and one upper link. A 3-Point Hitch is designed to raise and lower implements using the hydraulic pressure of the tractor.