

# The Ground Rules for Buying a Grinder

by Daniel Brandon

Driven by state and local mandates such as green waste diversion rules and no-burn regulations, private contractors and government entities from coast to coast are joining the growing ranks of those who chip, grind, screen, compost and otherwise process green waste. Some do it for profit, some do it as a public service, but one thing they all have in common is the need for special equipment to tackle this demanding job.

For example, in a bustling suburban Atlanta subdivision, a tub grinder and trommel plant are used to process the debris left behind by a land clearing contractor. Tangled and dirty piles of stumps, limbs and brush are ground into mulch that will be used for erosion control, while the topsoil is screened.

Thousands of miles to the west, at the Los Angeles Yard Trimmings Recycling Project, a steady stream of trucks deposit residential yard trimmings, brush and tree care debris through a knife-equipped trommel screen, which rips open bags and separates fine soil material. The debris is conveyed to a picking station where workers remove plastics, metals, rocks and other contaminants before the stream is finally fed through a grinder. Processing 400 tons of green and wood waste daily, Los Angeles' equipment system creates usable byproducts and saves taxpayers considerable dollars in tipping fees.

## Initial Q & A

Researching and selecting the appropriate equipment is the first, and perhaps the most important, step in establishing a successful - and profitable - wood and green waste processing business. Manufacturers offer a wide array of grinders, screens and other material handling equipment, and equipment needs will vary from one operation to another. Consequently, time spent on planning and research can be a wise investment.

Begin by determining:

- Your goals;
- What type and volume of material you will processing;
- Whether you are interested in simple volume reduction or total recycling;
- The potential markets for your end-products;
- Your equipment budget;
- Where you will be operating; and
- Whether you need a mobile or stationary operation.

Questions will crop up as you go along, but a few basic answers will steer you in the right direction. For example, to simply reduce whole trees and big limbs, a whole tree chipper probably is best because it can quickly handle tree length material. Throw stumps, root ball, brush, pallets and yard waste into the mix, however, and a grinder, not a chipper may be necessary.

Whole tree chips can be marketed in some areas, but if you want to manufacture today's popular shredded landscape mulch, a hammermill style grinder may be the

better choice. And to further enhance the value and marketability of the end-product, you may want to consider a mulch coloring unit.

Ultimately, your equipment purchases will be determined by what you want to do. And knowing your goals up front will bring you closer to making a wise purchasing decision.

### **Tub or Horizontal?**

If you determine you need a grinder, for example, you will immediately face two important questions: how big and what style? The size of your grinder will, of course, be determined by the volume of your incoming waste stream as well as your projected growth over the next two to five years.

There are two grinder style choices - tub or horizontal. Tub grinders are popular because they are productive, and easy to work on and maintain. If you can position your grinding operation in a remote, controlled area where bystanders are kept back at least 200 feet, a tub is a good choice. However, because of the tendency for grinders to occasionally propel debris up into the air, you may want to consider a horizontal machine, which can be operated in closer quarters, near streets and in residential areas. Horizontal grinders are better at containing flying debris and have the added advantage of being able to process longer material with less shearing or chain saw work.

If you're incorporating screening into your recycling operation, research your options to be sure that your screen will be sized properly to match your grinder output. Once you have a good feel for the size and style of equipment you will need to reach your goals, it's time to determine what equipment is available. If you have access, the Internet can be a good place to start.

### **Networking**

Most manufacturers have websites with information on their product offerings. Additionally, trade magazines often carry advertisements as well as directory listings with contact names, numbers and website addresses. Trade shows are another excellent way to gather a large amount of information in a short time. Compile literature, specifications and videos on the type of equipment you are considering. And, talk to people who already are involved in wood and green waste processing.

When talking with equipment salesmen, remember this: The good ones will ask many questions and will be more interested in your needs and goals than they are in simply selling you a piece of equipment.

Equipment manufacturers also can provide you with references. Most people are very willing to talk about their operations and oftentimes can save you from making the same mistakes they did. Consider the following examples.

Matt Wood, green waste recycling coordinator for the city of Los Angeles, has coordinated the purchase of three grinders, a trommel screen, picking station and various pieces of support equipment over the past few years.

"Each time, I go out and give all the manufacturers an opportunity to show me what they've got," Wood says, offering a glimpse of his research methods. "I look for

simple things such as durability, reliability and capacity...a machine that I know will do the job for a long period of time with minimal maintenance and down time."

Beyond the basics, Wood says he also looks for a company that emphasizes service and product support. "In L.A. today, green waste recycling is a big project and if the incoming waste stream stops, a lot of heat comes down," he says. "We need local, reliable parts and service, and mechanics that know what they are doing and are willing to do whatever they have to do to get you back on-line. A lot of companies and distributors want your business, but not all of them are willing to provide the level of service that we require."

To its credit, Wood says the manufacturer of Los Angeles' recycling system even helped the city figure out the proper ratio of brush to green waste to solve its odor problem. "[Manufacturers] have a lot of experience you can't buy, and the [good ones] also are willing to understand your needs and work with you to reach your goals."

More concerned with output, Chuck Conkle, co-owner of Conkle Tree Service in suburban Atlanta, says his chief concern about his grinding equipment is production. Three years ago, when Conkle branched off from the tree service company his father founded in the 1950s, he bought a tub grinder and went into contracting work. Today, he operates four tub grinders and support equipment 70 hours a week during Georgia's no-burn period from spring to fall.

"I'm looking first for productivity," Conkle says, while one of his four crews busily grind debris left in piles on an 8-acre clearing job for a residential development. "We pride ourselves in being able to get to a job, get it done and keep our customer happy. Folks constantly want to know where we are and when we will get their grinding done. The tub grinders we use are mobile enough to bring into a tight spot, but big, powerful and aggressive enough to get the job done."

Because Conkle and his father built a relationship with the same equipment manufacturer for more than 15 years, Conkle says he relies on the same company for purchases of both his hand-fed brush chippers and tub grinders. "It's important to us to know that they are there when we need them, that they'll be around for a while and that I can pick up the phone and get the people I need to talk to," he says.

Elsewhere in the Atlanta area, Bobo Grinding is benefiting from the development boom that has resulted in lots of land clearing and wood waste materials to process. (It is estimated as many as 60 wood grinders are operating in the greater Atlanta area.)

Spinning off their grading business three years ago, Jimmy Bobo and his brother David currently run three wood recycling yards with three grinders, screens, track hoes and dozers - approximately 20 pieces of equipment in all - supported by 25 employees working six days a week.

When shopping for their first piece of equipment, the Bobo brothers networked to do their research. "We made some phone calls to other contractors who had experience with grinders and told them we were looking for the 'Caterpillar of grinders,'" Jimmy says. Choosing three tub grinders, so far, their experience has been positive.

"It's basically a simple piece of equipment with controls that are easy to operate and components that are easy to maintain and work on," Jimmy says. "The production is excellent, and it's as inexpensive to operate as possible."

Brother David agrees. "Its basic - solid and heavy built. We run our tubs 10 hours a day, six days a week all year around."

Terry Tree Service has had similar success with its three tub grinders, a whole tree chipper and several hand-fed chippers. Operating one of the fastest growing businesses in the Rochester, N.Y. area, Tim Pope, vice president, says the company is well-versed in wood and green waste recycling equipment because it has to be - the company had a 300 percent increase in revenue in the past year.

In addition to its core business of residential tree care, Terry Tree Service has rapidly expanded into land clearing, right-of-way work and storm damage cleanup as well as operating a wood recycling center that has produced 100,000 cubic yards of premium mulch in the first three quarters of 1999.

"Because of the quality of work we do, our customers are pleased, and that leads to more business," Pope says. "We are able to get in, get the job done and get out because we have the right equipment...the right tools."

Researching the typical factors - price, durability, parts and service - as well as specific design features on the machines, Pope says he chose tub grinders with self-contained loaders because a second piece of equipment to feed the machine was not necessary. "I also look at things such as the torque limiter, where certain components are placed. And I look for the extra steel and weight that make the machines sturdier," he says of his purchases.

In Southern Georgia, just north of Jacksonville, Fla., Orville Saunders of Camden County's wood waste recycling facilities has had experience with several types of grinders, including high-speed hammermills and low-speed, high torque machines.

With no true yard waste facility in the surrounding counties, Camden County had the foresight to start a facility that handles all the wood waste generated within the county, processed waste brought in by the King's Bay submarine base nearby, and contract grinding projects for several adjacent counties.

After doing his homework, Saunders says he ultimately chose a horizontal style grinder for the Camden County site because of safety reasons.

"We demonstrated tub grinders, but when I saw pieces of debris fly above the tree line, I knew we wanted better material containment," he says.

Saunders also analyzed other factors when making his equipment choice. "Because we move the machine around to several locations, we needed a unit that you could set up quickly," he says. "Also, because we often grind in remote locations, we need a machine that does not break down."

When he had problems with his first prototype machine, Saunders says he relied on - and immediately received support from - the manufacturer.

"[The situation] could have been frustrating, but it wasn't because of the support we received from the company," he says. "Now I feel like there's someone we're in business with to help get our product out."

The early problems have been ironed out, and Camden County's wood hog is a source of pride for Saunders.

"We had high expectations for the machine, and it has greatly exceeded all those expectations," he says. "We can't keep up with it using two CAT 950 loaders. We basically get out of the way and let it do it's job."

And by doing his homework and taking into account fair pricing, parts availability and service, Saunders says he has not been disappointed with his equipment choice. "With this company I don't feel like I'm out on a limb by myself," he says.

### **Top 10 Buying Factors**

When purchasing your equipment, rely on your answers to the following questions:

1. **Production:** Is the equipment productive enough to handle the incoming waste stream?
2. **Simplicity of operation/maintenance:** Is the design easy to operate, maintain and service?
3. **Product support:** Does the company have the resources to provide parts and service support quickly and efficiently?
4. **Durability:** Can you expect the equipment to be productive for an extended period of time with little significant down time?
5. **Relationship with the manufacturer:** Does the manufacturer understand your business and have a commitment to help you reach your goals?
6. **Price:** Is the price competitive with comparable equipment?
7. **Safety:** Is the machine safe to operate and does the manufacturer provide sufficient safety information?
8. **Reliability:** Can you count on the equipment to be up and running every day?
9. **References:** Does the manufacturer provide you with contacts who are running similar operations?
10. **Reputation:** How is the manufacturer regarded within the industry? What do others have to say about the company?