

CURRENT AND FUTURE NORTH AMERICAN COMPOST MARKETS

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As composting grows in popularity and research continues, the science of composting is becoming better understood. The successful marketing and distribution of composted products, however, is less than an exact science. In order to develop a successful compost marketing program, it is important to understand current and potential compost markets, their specific applications for compost products, their product quality requirements, and their current level of acceptance for specific products. It is also important to understand that specific barriers to market development exist, as do specific challenges.

When preparing to approach specific compost markets, we must first consider the characteristics of our particular compost product. The specific chemical, physical, and biological characteristics of a product will affect our ability to market it within specific markets. Producing a product of consistent quality or possessing consistent characteristics will also influence its acceptability within specific markets. The ability to meet other end user requirements, such as providing technical assistance and service, are also factors not often considered. It is necessary to educate end users regarding proper compost use, as well as to address stigmas that may be attached to the product. False marketing barriers, based on regulatory issues, must be removed and market related research and planning must be approached with the same seriousness as design and operational considerations.

As illustrated by studies performed around the country, huge potential markets exist for the use of various composted products. Composted municipal and industrial wastes such as yard waste, biosolids, food waste, and mixed solid waste can be utilized as feedstocks for composting, as may agricultural waste such as manures and crop residues. Potential markets can be broken into five major categories. These categories are growers, landscape/turf, land reclamation/environmental, government agencies, and blenders/resellers.

On a national basis, the marketing of composted products to growers has achieved moderate success. There is more widespread usage by nursery and greenhouse growers in states where strong research support programs have existed. They are apt to use compost as an economical alternative to peat products. The compost will supply nutrients, may reduce the necessity to apply pesticide, and create crops with an improved shelf life. Product may be used as a component to growing media at various rates. Many growers, however, will not use composted waste products as they are not considered to be of a high enough quality or consistent enough products to be used on an on-going basis. These end users will only use products which are consistent in nature and which will provide consistent results. Growers are generally conservative, as one failed crop could doom their business. Field nursery and liner growers are also possible end users and would have less stringent product quality specifications than container growers. Nationally, however, little success has been made approaching these markets as they are not known for applying organic materials to their fields. Therefore, compost may be economically unfeasible for specific end users to use, unless we can better illustrate to them the ability of compost to reduce the cropping cycle of their crop (trees). Even though widespread use of composted products on farms does not currently exist, except in specific geographical regions such as the Southeast and Southwest, growers of agricultural crops probably represent the largest potential market for compost. Producers of orchard crops, other fruits and vegetables, field crops, and pasture lands have successfully used other agricultural based waste products such as manures. Therefore, the infrastructure for compost use may already be established. In order to approach agricultural markets, feedstock dependent regulatory constraints governing agricultural use must be addressed. Although many farmers will not use compost products simply because of their cost, others may not see the need for compost since they have been growing crops using

chemical fertilization only. Some may be concerned about the long-term risks of applying waste-derived products, and others are concerned because many food processors and packagers will not purchase products grown on lands where specific organic wastes have been applied. The use of compost in sod production also has some potential, but like field nurseries, these users do not typically apply organic materials to their soils, so they may not feel the use of this type of product is necessary. The use of compost in the production of *fast sod*, sod grown in a layer of compost over plastic, however, shows economic potential. Through this method, a marketable sod crop can be grown within three months and application of pesticides and fertilizers can be minimized or eliminated.

Landscapers are probably the nation's largest group of paying customers for compost products. The most popular use of compost by landscape professionals is in soil incorporation for turf establishment, and widespread acceptance of compost products used in these applications already exists. Landscapers and turf managers are familiar with organic soil supplements and their benefits, and realize the product can be used cost effectively. Compost is used in both commercial and residential applications as a turf topdressing, and in turf maintenance and renovation practices. The product used in this application must be fine in texture and spreadable. The construction industry is beginning to use compost products when specified, although cost has been a deterrent to that market. Compost would be applied to the soil and incorporated prior to turf establishment. Some composts have been utilized as mulch alternatives, instead of bark mulch products. There has been moderate marketing success with this application. Some landscapers and turf managers, however, do not use organic materials in their normal practices and are unwilling to try products which are waste-derived. Golf course and other sports turf applications are also a large potential market for composted products, however, there has been minimal market development in this area. This is primarily because many of the currently available compost products do not meet industry requirements and because additional research is necessary to justify their usage.

The use of compost in land reclamation and environmental applications has also grown substantially over the past several years, as most states and regions have sites of environmental concern, such as landfills, quarry pits, and petroleum contaminated areas. Compost use on land reclamation sites, such as mine and sand pit reclamation, have utilized significant quantities of compost products. This market, however, has been typically non-paying, with its use being subsidized by the compost producer. Land reclamation and product used as landfill cover or in landfill closure is also a large volume market. Compost use is effective in establishing vegetation, binding and degrading specific pollutants, and reducing surface run-off. Regulatory constraints and public perception issues, as well as economics, are significant barriers to the growth of this market. On landfills, where topsoil has not been stockpiled, composts of various grades have been used as a landfill cover, to develop final vegetative cover of cells, and on slope stabilization. This market shows good potential in certain areas of the country. It can be a very helpful market for composters who are producing a product which is not as acceptable for ornamental markets or ones located near or at landfills. Because of its unique characteristics, compost is also being used for various environmental areas, such as in wetland mitigation, erosion control, as a storm water filter, and component to biofilter media. This area represents a highly technical market which typically requires a higher grade product. In areas such as erosion control, more research is necessary to assist market development. Compost products have been shown to be extremely effective on highly erodible sites, but the economics of its use must continue to be researched. The use of compost in wetland mitigation and the creation of manufactured wetlands shows great promise since it can provide a highly organic and microbially rich environment for species common to the wetland environment.

The use of compost by government agencies has grown as recycled product use mandates have been created. The use of composted products by these agencies, often the same ones which are producing it, has not been overly significant to this point. Nevertheless, they represent a potentially large market. The government agencies which typically use compost products in similar applications as landscapers and turf managers have and maintain significant acreage on which they can utilize the product. The Departments of Transportation, General Services, and Parks and Recreation, all represent government entities and agencies with vast acreage which can accommodate compost use. A key to developing these markets is to educate procurement officials regarding

the products and having them amend their procurement specifications to include them. Often, very large municipal producers of compost do not even use the compost products they produce.

Another well-developed paying market for compost products is resellers and product blenders. These individuals resell product at a wholesale or retail level and may blend compost with other materials in order to create products which are alternatives to other well-established products such as topsoil, growing mixes, etc. Typically, higher quality and consistent products are used or resold by this market segment. For some end users such as topsoil dealers, the cost of using compost may be a deterrent as may stigmas associated with its feedstocks. Compost can also be used as a base for fertilizer products, as well as in many bulk blended products such as in landscape mixes, growers mixes, and golf course mixes. Garden centers have been involved in the redistribution of compost products, both in bulk and bagged form. Since much of this product is marketed on a retail level, compost resold by garden centers is typically high in quality, dark in color, free of foreign matter and odor. These products are also commonly marketed under a registered trade name and are known for being user friendly. Compost from specific feedstocks are stigmatized and more difficult to market initially. Of course, the sale of composted animal manures, mushroom compost, and other agricultural wastes have been marketed for many years in bagged form through large mass merchandisers.

We can encourage market development by producing high-quality compost products which meet the needs of end users and by running our composting facilities like mainstream manufacturing facilities. Compost marketing programs must be active in nature, must educate users, and work toward the elimination of feedstock-related stigmas. It is necessary to encourage uniform science-based regulations as well as support end use research and encourage the intra-state marketing of products. It is also extremely important to encourage the sale of compost in order to educate end users and to illustrate to them that these products have value.