



# *Inside Ag*

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### **Compost!**



Compost can greatly improve the physical properties of soil for crop production and gardening. In recent years, composting has become an increasingly important part of Colorado agriculture and a source of economic growth and opportunity in the state. By recycling materials back to the soil that might otherwise go to waste, composting is also significant to Colorado's environmental stewardship.

Colorado Department of Agriculture (CDA) officials work to ensure that compost produced and sold in the state meets well-defined and nationally

recognized quality and safety standards. Agricultural composters are registered with the CDA's Inspection & Consumer Services Division Compost Program; other composters are registered by the Colorado Department of Health and Environment. All told, around fifty large scale and commercial composters are registered in Colorado.

Composting is not a new practice. The Romans recommended it two thousand years ago!

More recently, composting has become a significant part of efforts to make agriculture and horticulture sustainable and environmentally sound. Limited resources and growing demand for food crops have created an economic opportunity for producers engaged in the recycling of organic materials for beneficial use. Growth in the market for organically raised crops has also greatly increased the economic importance of compost in the last few decades.

"The composting industry continues to expand," says Ron Alexander, Vice President of the US Composting Council, a leading national composting industry association. "New composting facilities are coming on line all the time. Best estimates are 4,000 to 4,500 commercial facilities in operation nationwide."

Compost is the beneficial product of controlled biological decomposition of organic matter by soil microbes. Agricultural crop residues, yard waste, animal manure, food waste and other organics are selected, piled, mixed and allowed to compost over weeks to months. The composting process relies on aeration and mixing, adequate moisture levels, and the proper ratio of carbon sources such as dried plant material to nitrogen sources such as green plant material. The compost end product bears little resemblance to the "feedstock" that went in.

Colorado State University Extension serves composters as a technical resource. "The two most common questions we receive are whether cold weather is a problem and whether Colorado's dry climate affects composting. With good temperature monitoring and periodic addition of water as needed, composting can be done year-round in Colorado. While the composting process may slow during colder temperatures, break down is still occurring if the pile remains moist and aerated," says CSU Douglas County Horticulture Agent Andrea Cummins.



Concerns with herbicide carryover through the composting process were recently raised by the US Environmental Protection Agency. Although compost is generally safe and beneficial, problems can arise with unwanted substances such as pesticides and weed seeds. “We advise all composters to be cautious about their feedstocks. If they have questions about the results, their local extension agent should be able to direct them to resources to help determine the cause,” says CSU’s Cummins.

To be labeled as compost in Colorado, product must meet certain statutory criteria for levels of ammonia, carbon dioxide, maturity and maximum levels of deleterious substances and undesirable bacteria. CDA inspectors routinely collect samples for the CDA Compost Program for analysis in the Department’s Biochemistry Laboratory.

The CDA is a general resource for composters. “Our office can provide information and can direct commercial producers to resources that can help to ensure compost is safe, beneficial and in compliance,” says Jonathan Handy, CDA’s Compost Program Administrator.

For further information on commercial composting and fertilizers, e-mail Jonathan Handy at [jonathan.handy@ag.state.co.us](mailto:jonathan.handy@ag.state.co.us) or call him at (303) 867-9237.

**Photos by Gene Kleve & Jean Armstrong**