CLEMSON EXTENSION

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WASTE MANAGEMENT

ENVIROSHOPPING: SHOPPING WITH CONCERN FOR THE ENVIRONMENT

Each week, a ritual called "taking out the garbage" is repeated in nearly every household. In neatly tied-up trash bags are the unwanted fragments of our daily lives. Once deposited at curbside or in a dumpster, the garbage (technically called solid waste) is picked up, hauled to a landfill for disposal, and forgotten by those who generated it.

South Carolinians throw away about five and a half pounds of solid waste per person each day from their homes. That is close to four million tons of solid waste generated in the state each year. Unless steps are taken to reduce or recycle the amount of waste produced in the state, over five million tons of solid waste will be generated annually in South Carolina by the year 2000. Approximately 80 percent of all our solid waste goes to the 39 permitted municipal solid waste landfills in the state. These are rapidly filling up and closing. With less space to dispose of waste, we must work on reducing what goes to our landfills. The United States Environmental Protection Agency (EPA) has put forth a plan to alleviate the solid waste problem. The EPA has developed a hierarchy that first calls for source reduction, followed by recycling, incineration, and finally landfilling. Our task as concerned citizens is to implement this plan.

All the garbage produced in our homes, businesses, and industries is "here today...here tomorrow." We must be responsible not only for what we consume, but also for what we dispose of. Much of the garbage we dispose of wastes energy and materials and can release pollutants into the environment.

The environmental impact of trash begins long before it becomes trash. It starts with the mining or extraction of raw materials and continues when the raw materials are transported to the factory. When the products are manufactured, stored, and transported to the retail store, pollution can occur. Each incident of pollution may be small, but added together they contribute to the pollution problems that are of such concern today. By reducing the amount of waste you produce, you are helping protect and preserve our environment.

PACKAGING WITH A PURPOSE

There are a number of ways to tackle the garbage problem. One way starts with you and the products you buy. You can shop with the environment in mind. Try to buy products that:

- make the best use of energy resources;
- do not pollute our air and water;
- are reusable or recyclable;
- are made from plentiful resources or from recycled material; and
- use a minimum of materials in design and packaging.

When you shop for products like these, you are enviroshopping.

PACKAGING: CONVENIENCE IN PLASTIC AND PAPER

Packaging comprises about 30 percent of our household waste. Most of what we buy was wrapped in a package at some time on its way from producer to consumer. Much of it is in several layers of packaging. Is all of that really necessary?

Packaging is an essential part of our marketing and distribution systems. It performs several functions:

- ✔ Protects food from light, heat, oxygen, natural contamination, and tampering.
- ✔ Preserves food and prevents food waste.
- ✔ Protects consumer goods from being crushed, soiled, or shoplifted.
- ✔ Protects children from ingesting drugs and hazardous chemicals.
- ✔ Informs consumers of proper use, storage, features, and warranty.
- ✔ Allows for easier warehousing, transportation, and distribution. Can be handled with large-scale mechanical equipment.

Many packages are designed to provide an extra measure of convenience to the consumer. Some packages contain ready-to-eat or single-serving foods. Others are disposable or microwavable.

Packaging is sometimes used to give an extra boost to sales. Multipacks encourage quantity purchases. The eye appeal of packaging draws shoppers away from the competition. Larger packages use more shelf space and attract shopper's attention.

Most packaging uses materials very efficiently, minimizing the energy of production, transportation, and materials cost. The packaging industry continues to refine and improve products. Some improvements allow for thinner, lighter-weight materials that reduce energy and materials costs, and reduce the amount of garbage going to the landfill. Other improvements make the product more convenient to use or improve product safety and shelf life.

PACKAGING CHOICES

Some packaging, however, is excessive. Excessive packaging wastes energy and valuable materials, and it contributes to the waste disposal problem. Sometimes when improvements are made for convenience sake or to increase shelf life, the packages produced use more materials or are more difficult or impossible to reuse or recycle.

Many products are available in a wide choice of packaging options. Juice, for example, can be purchased in cans, bottles, jars, cartons, or single-serve juice boxes. It comes either shelf-stable, refrigerated, or as frozen concentrate. As a consumer you have the choice.

When you shop, choose the type of packaging that has the least environmental impact in terms of energy use, amount of materials used, and recyclability. The amount of packaging going into the waste stream can be reduced significantly. Your participation will be a positive contribution to the solution of an important problem. You can improve the quality of life for yourself and our society by adopting environmentally appropriate behavior. It is up to you and a responsible packaging industry.

You may think your part will not be enough to matter. Your garbage by itself is not a problem. But when you add it to the garbage of your neighbors, your town, your county, the whole state, then the problem has grown to huge proportions.

THE FIVE "R's"

BECOME AN ENVIROSHOPPER!
Follow the five "R's" of enviroshopping:

- ✔ REDUCE the amount of packaging you buy and throw away
- ✔ REUSE packaging when possible
- ✔ RECYCLE whenever possible
- ✔ REJECT packaging that is unsatisfactory
- ✔ RESPOND to producers and retailers to let them know how you feel

REDUCE PACKAGING

Reduce your garbage before you buy it — **PRECYCLE!** Precycling is the most important thing you can do toward solving the waste management problem. If you never buy it and bring it into your home in the first place, then you do not have to "manage" it. You do not have to figure out if it can be reused or recycled. You do not have to dispose of it.

Precycling Saves Energy

Precycling does make a difference. Compare the packaging material in two quart containers and in one half-gallon container. The two quarts use more packaging than the one half-gallon container. If 70 million American house-

Here are some examples of precycling strategies:

- ❑ Take grocery bags back to the store to keep from having to get new ones every time.
- ❑ Purchase and use canvas shopping bags.
- ❑ Look for packages that use the least amount of material. Avoid those that use several layers when one would do.
- ❑ Buy products in the largest quantity possible in one package. One large jug of cleaner uses less packaging material per ounce than several small bottles. Refill a smaller spray bottle or dispenser from a large jug.
- ❑ When it comes to large containers of food, be sure you do not buy more than you can use up before it spoils.
- ❑ Look for products with reusable dishes, rather than throw-aways.
- ❑ Whenever they are available, buy concentrated products then dilute them at home in a larger reusable container.
- ❑ Fresh fruits and vegetables are available loose or packed in trays with a plastic film. Loose produce may become bruised from handling, but you can select just the pieces you want. This uses less packaging.
- ❑ "Fast food" restaurants produce a large volume of trash, since most of their serving materials are throw-aways. Encourage them to use recycled materials, and to recycle their wastes, or prepare your own food at home. Eat in the restaurant when you can to save the extra pieces of packaging from the drive-thru.

holds bought a half-gallon container of milk a week instead of two quarts, they would reduce paper discards by 41.6 million pounds and plastic discards by 5.7 million pounds a year. This would save $145.6 million in packaging and more than 1 trillion BTUs of energy — enough to heat and cool 7,500 households for an entire year.

BE AN ENVIROSHOPPER

Think carefully about the convenience of a product compared to its environmental impact. Sometimes you may need to buy an item with more packaging to get the product you need. Often, however, you can do without the extra convenience. You will save energy, conserve resources, reduce pollution, and possibly save money, too.

REUSE PACKAGING

Packaging comes in many forms. There is an endless variety of cardboard boxes, metal tins, plastic jars, and glass jugs. There are bowls, boxes, tubes, trays, tubs, and jugs. Packages are compartmented, round and square, plain and fancy, with lids, sprayers, snaps, flaps, seals, and drawstrings. Their uses are as varied as your imagination and determination to make use of these high-quality materials. Here are some examples.

- Use divided cookie trays as desk drawer organizers.
- Cut a small plastic container in half lengthwise to make a flour scoop.
- Punch holes in the bottom of a round container to make a flower pot.
- Cover an old wooden box with fabric, add a cushion to the top, and you have a new stool to sit on.
- Polystyrene vegetable trays are good for mixing paints in.
- Drawstring mesh citrus bags make good laundry bags. (Use only for children old enough to handle the strings safely.)
- Cover cans with old fabric, wallpaper, and wrapping paper. Use them to support a pretty board on your desk or kitchen counter to add shelf space, or fill with goodies for holiday giving.
- Frozen and microwavable convenience foods often come with their own dish. Reuse these dishes for making your own convenience meals if the item is designed for reuse. Some are not.
- Many types of containers are in demand at schools, child care centers, and senior centers. Call local agencies to see what they need.

And of course packages of all kinds can be used for storage. Packages can store items in the shop or garage, the sewing room, the kitchen, the playroom, the bathroom, the office, and the trunk of your car, just to name a few. Packaging is a resource you pay for with every purchase. Think creatively and use and reuse it whenever you can.

RECYCLE PACKAGING

Many valuable items do not need to become waste. State law requires South Carolina's municipalities to reduce solid waste and increase recycling. What kinds of packages can you recycle? Aluminum and glass are recyclable. Some paper and some plastic containers can be recycled. Steel or "tin" cans are recyclable. They all are easier to recycle when they are single-material packages, rather than a mixture of two or more materials in one package.

For example, aluminum is 100 percent recyclable. A pound of aluminum that is recycled will yield a pound of "new" aluminum. But some types of packaging are made from several layers of plastic, paper, and aluminum. This aluminum cannot be separated easily, if at all, so it is lost for future use.

Many food packages are made from recycled glass, aluminum, and paper products. Recycled plastic, however, cannot be used for packaging food. Plastic food containers are made of new plastic, as the Food and Drug Administration has generally ruled out recycled plastic for reuse in food containers due to danger of contamination. An exception is plastic soft drink containers recycled for new soft drink containers.

RECYCLE PACKAGING MATERIAL

Recycling glass. Glass is easily recyclable and saves up to 25 percent of the energy compared to making glass from new materials. However, glass is rarely made from 100 percent recycled glass, so the energy savings is usually less than 25 percent. Recycled glass containers can be used for packaging food, and in fact, glass containers can be refilled without recycling. Refilling is the most energy efficient use of glass containers.

Recycling cardboard and paper. Recycled cardboard and paper are used to make grey colored cereal boxes and many other cartons. Recycling paper saves from 24 to 54 percent of the energy for paper manufacturing.

Recycling steel. Steel is easy to recycle because it can be magnetically separated from other materials. In 1994, about 53 percent of steel food, paint, and aerosol cans were recycled. To make steel from recycled material takes about half as much energy as making it from its traditional raw materials — coal, iron ore, and limestone.

Recycling aluminum. Aluminum beverage cans on the supermarket shelf today were most likely cans before. More than 60 percent of all aluminum beverage cans were recycled in 1993. They are typically recycled back into beverage cans. It is possible for an aluminum can to move from the retailer's shelf, to your home, into the recycling process, and back to the store shelf in as little as six weeks. Producing new metal from used aluminum saves 95 percent of the energy needed to produce aluminum from ore.

Recycling plastic. Some types of plastic are currently recycled in significant amounts. About 20 per- cent of polyethylene terephthalate (PET) used for making the liter-size soft drink bottle is being recycled into such items as fiberfill, strapping, carpet fiber, ski jackets, and geotechnical materials like erosion control mesh.

HDPE, or high-density polyethylene, used for the gallon-size milk jug, is mainly recycled into agricultural drainage pipes. Other recycled products include toys, flower pots, plastic lumber, base cups for soft drink bottles, and containers for nonfood items, such as dish detergent or other household cleaners.

New Technology. The technology for recycling other types of plastic is still being developed. We also need to develop the infrastructure for collecting, sorting, and processing the plastics into new, useful products.

Plastics of different resin types cannot be recycled together without producing a different type of plastic. To get the same type of plastic after recycling, they need to be sorted by resin type. If the plastics can be separated, as in the two-piece, liter-size soft drink bottles, they can be recycled, but separation adds to the cost of recycling. Some recyclers can take a mixture of all types of plastic, using it to produce park benches, fence posts, parking stops, and waterproof "lumber" for piers.

Sometimes it is difficult to differentiate plastic types. For this reason, the plastic producers have begun to code the containers they make with a number indicating the type of plastic resin used to make the container.

At present, it may not be practical to recycle certain types of plastic. For recycling to work, there needs to be a well-functioning, economically feasible recycling system to convert a particular material into another marketable product.

Closing the Loop. As an enviroshopper you play a double role. You provide the raw materials from your trash, then you need to buy the recycled material after it is made into something new.

Recycling has no end. It progresses in a loop — purchase, use, recycle, reformulate, and resale. It is up to you to buy recycled materials whenever you can. Look for the recycled symbol on packages you buy.

Until large-scale markets are developed, recycled materials may cost more than new ones. But every time you buy a recycled product, you help to increase the market and bring down the cost. When you buy recycled material, you maintain the demand for your empty containers and worn out goods. Do your part to help "close the loop" of recycling.

Recycling is important. It makes good sense to reduce the environmental pollution from energy use and manufacturing, and to extend our resources. But recycling is only a part of a complete waste management strategy. Remember the first two R's - Reduce and Reuse. As important as recycling is, it will have far less impact than reducing and reusing.

REJECT PACKAGING

When you avoid buying items that are wasteful, environmentally harmful, or of poor quality, you reject those items in favor of other items that can be reduced, reused, and recycled. The products you buy will determine which companies stay in business, so they pay close attention to your shopping habits.

Your pocketbook is a valuable tool. As an enviroshopper, you can use it to encourage the kind of packaging that fulfills its necessary functions without excess and with the least effect on the environment.

RESPOND

Your preferences are important to stores and manufacturers who want to keep you buying their products and shopping in their stores. Tell them what you like and what you do not like!

Use consumer hotlines. Explain the need for enviroshopping and why you support it.

Let store managers and manufacturers who are making good environmental choices in their products and packaging know that you recognize and appreciate their efforts. You will find the company address on the package of most products.

Make suggestions to stores to eliminate prepackaging of produce. Suggest that they stock refills, and offer larger quantities and sizes of products. Ask them to consider recyclability and source reduction in the products they offer for sale.

You can encourage simpler, less complex packaging. Can label information be printed on a hanging tag or a peel off label, rather than needing a whole package? Less packaging can save money for the manufacturer, the consumer, and the waste manager, and it can help protect the environment and save resources.

Encourage local government officials to initiate or expand a recycling program in your community. The technology is available for recycling glass, newspapers, aluminum, steel, and some types of plastics.

Learn as much as you can about the environmental consequences of your actions. Make a commitment to become an enviroshopper and help to educate others.

ENVIROSHOPPING

Learning new habits can be difficult. You may spend more time in the grocery store trying to find the products that meet your new standards. You may spend a few minutes longer at certain tasks when you buy packaging that is less convenient. You may need to reorganize a kitchen cabinet to make room for reusable items and those that are recyclable. But the effort is worth it, and gradually these tasks will become easier and easier.

Enviroshoppers can play an important role in reducing the solid waste problem. To actively support the environment in the marketplace, make choices according to the 5 R's of enviroshopping. Every individual's participation is important and does make a difference.

Adapted by: Joyce H. Christenbury, CFCS, Extension Family Resource Management Specialist, October 1992, from Marie S. Hammer and Joan Papadi, *Enviroshopping: Buy Smarter*, HE 3158, June 1991, Florida Cooperative Extension Service, University of Florida, Gainesville, FL

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