

Practical Usage For Solar Energy Is Noted

What is powered by the sun, can save thousands of gallons of water and produce fertilizer supplement for your garden? If you guessed a passive solar composting toilet, then you answered the riddle correctly.

The passive solar composting toilet is the brain child of Paul Gallimore of the Long Branch Environmental Education Center near Leicester in Buncombe County. When Gallimore first approached local health officials about allowing the use of composting toilets they were not overly enthusiastic.

Gallimore did not give up on the idea however. He decided to try and legitimize the idea through the grantsmanship process. By bringing money into the county for a demonstration process he hoped to prove the reliability of the composting toilets. The Western North Carolina Nature Center in Asheville agreed to let Gallimore build composting toilet building on their grounds. The Health Department agreed to test the compost for pathogens after the toilet had been in operation for two years.

For funding, Gallimore applied to the Department of Energy's Appropriate Technology - Small Grants Program. He proposed to build two units, one at the Nature Center and one at the Long Branch Center. The Department of Energy liked the idea of a toilet which didn't pollute water or waste energy, so they sent the Long Branch Environmental Education Center \$9,579.70 to design and build the demonstration units.

If you go to Asheville be sure and to the Western N. C. Nature Center off Highway 81. In addition to their excellent nature exhibits they have a two-seater, passive solar composting toilet placed strategically near the exit

gate. You can recognize the passive solar composting toilet by the solar collector on the side of the building near the ground. The collector traps solar energy in the form of infrared heat. The heat is ducted "passively," by natural convection from the collector up a slight incline to the waste pile. The warm air from the collector aids the microbes in decomposing the wastes aerobically. Another device, a solar chimney, passively vents odors from the waste pile. The chimney is glazed on the south side. The metal chimney is warmed by the infrared heat from the sun and since hot air rises, it draws air from the compost chamber and vents it out above the roof.

In this way, the wastes decompose in an odorless, aerobic fashion. The lids of the toilets are weather stripped so that flies cannot gain access to the compost pile. Since it is essential that the lids be closed when the toilet is not in use, Gallimore designed them so they would close automatically as soon as the toilet is vacated.

The building which houses the toilets at the nature center features a set of blueprints of the toilet design on one wall. The door to each toilet stall is graced by a handsome instruction sheet on composting toilets. There is also a brochure holder above the paper towel dispenser where you can get a free brochure on the passive solar composting toilet.

About the only thing different in using a composting toilet is that instead of a water flush you use a dry flush. In essence, you add some carbonaceous material to the waste pile after using the toilet. At the Nature Center there is a chamber near the toilet containing wood chips which you scoop into the toilet before you leave. One scoop

per poop will assure a proper ratio of carbon to nitrogen in the waste chamber. Five parts organic material to one part feces is about the right proportion to maintain.

The only required maintenance for the passive solar composting toilet is the removal of some humus once a year or so. Even though the composted material should be pathogen free, Gallimore recommends putting it in an outdoor compost pile for a year before placing it in your vegetable garden, or you can use it for ornamentals or orchards immediately.

The composting toilet at the Nature Center is an attractive facility; but, the toilet at the Long Branch Center is an throne fit for a king. Not that the actual toilets are much different. Its just that the Long Branch commode looks out a captain's window through the second story of a passive solar greenhouse which faces south toward a beautiful mountain vista.

Instead of a collector outside the dwelling, the Long Branch Center's composting toilet utilizes a trombe wall (mass wall) inside the first floor of the greenhouse. Since the vault is a masonry enclosure, Gallimore simply glazed the south wall of the vault leaving about a foot between the glazing and the masonry vault wall. The wall is painted an attractive dark blue. There is a screened removable vent beneath the glazing which allows air to enter the trombe wall, vault, and air staircase. When its time to remove humus from the vault you merely remove the screened vent and shovel the humus into a wheelbarrow. The trombe wall heats the air entering through the vent. The heated air rises through the air staircase and PVC pipe embedded in the south wall of the vault and enters the waste chamber. In other

respects the composting toilets at the Nature and Long Branch Centers function in similar ways.

If you would like to visit the Long Branch Environmental Educational Center you should call (704) 683 - 3662 to make an appointment and get directions. The Long Branch Center sells a variety of publications on composting toilets and other subjects. In fact, you may purchase

blueprints for the passive solar composting toilet by sending \$10.40 (money order preferred) along with your request to the Long Branch Center, Route 2, Box 132, Leicester, NC 28748.

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LAWN & GARDEN CARE

... ask the experts

KEEP FLOWERS INSECT FREE

Q. I have a neighbor who has beautiful flowers in her garden from spring to fall, but I have never been very successful with them. Can you give me some good tips on maintaining a flower garden?

A. Most flowers are as hardy as they are beautiful and they'll flourish almost anywhere. However, it does take a little effort on your part to keep them healthy and free of insects and disease.

Here are some suggestions from the National Sprayer and Duster Association to provide your flowers with maximum protection; 1) Give plants ample food and water. Strong, healthy plants are less susceptible to attack by insects and disease and also produce better blooms. 2) Mulch plants. Mulching conserves soil moisture and stabilizes soil temperatures. Mulch also helps prevent weeds that compete for soil nutrients, moisture and sunlight. 3) Maintain a regular spray program. According to the National Sprayer and Duster Association, an all purpose spray every week to ten days will help control insects and fungus disease on roses and other flowers.

Q. Could you give me some pointers on spraying techniques for my flowers?

A. One of the most important things to remember about spraying flowers is to put the spray right where the trouble is. Many insects and most fungus disease are found under plant leaves, so it is important to spray or dust there. A haphazard application may not hit trouble spots and may allow infestation to spread. Mix spray material exactly as recommended and follow all label directions carefully.

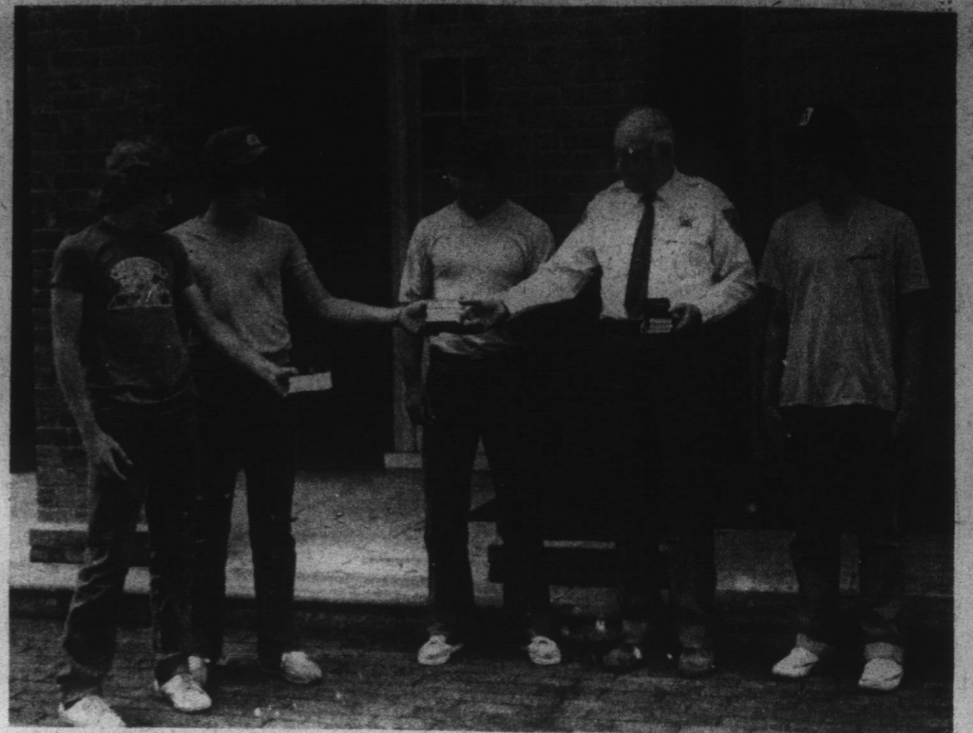
It is also important to select your equipment carefully. The size of the job determines the size of the sprayer. Although a hand sprayer is excellent for treating a few flowers, a compression or tank-type is better for fairly large plantings, and power sprayers are the best choice for bigger jobs. The right spraying or dusting equipment not only makes your job easier but helps produce better results.

Remember to always use a separate sprayer for weed-killers. Broadleaved weed killer may destroy flowers just as readily as weeds, and is difficult to wash out of the sprayer tank. Label this sprayer and set aside for use only on weeds. With the proper sprayer and spray material you can keep your flower garden healthy and producing beautiful blooms throughout the season.

If you have any questions regarding pest and weed control, write to National Sprayer and Duster Association, 410 N. Michigan Avenue, Chicago, Illinois, 60611.



The three children of one Norwegian family all celebrate their birthday infrequently. They were born in 1960, 1964 and 1968—on February 29th.



DONATION TO DETENTION FACILITY — Pioneer Royal Ambassadors from Chappell Hill Baptist Church, in Tyner, N.C., presented ten Soul - Winning New Testaments to Sheriff Troy Toppin for use in the Chowan County Detention Facility. Giving the testaments are from left to right, Paul Harrell, Kendal Bulhs, Randy Reed, Honor Trustee at Facility, Sheriff Toppin and Brian Baker. Billy Old is Pastor at Chappell Hill Baptist Church.

Counting Our Blessings

There's now some encouraging news for cities and towns near rivers and marshes that have been breeding grounds for mosquitoes. A selective biological insecticide has been developed that kills the mosquito larvae but does not harm people or the environment.



In a test in Georgia, the insecticide was applied to a river breeding ground for wild salt marsh mosquitoes. The pre-count of mosquito larvae found an average of 200 larvae per water dipper, a heavy infestation. After the site was sprayed, officials were delighted with the results. The insecticide, Teknar, manufactured by San-doz Inc., San Diego, kills only first, second, third and early fourth stage mosquito larvae and does not hurt the environment.

WORD SEEK™

Comic Book Characters

T W E E T Y E L G O O G Y E N R A B
E N S T H G I N D I M T P A C W Y
E K C E N A M D N A S L R F F C O D
N C A P Y I P R E O N G E E P B N S
A A P R F E I L L I T O G L R S D R
U J T I D R P L B F G N N I B C E E
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C A P T A M E R I C A V K M I G P R
A G L N M N V T F Y C A R T K C I D
E O M O T N O T E N R O H N E E R G

Answers: Superman, Tarzan, Kerry Drake, Teera, Lone Ranger, Phantom, Prince Valliant, Sandman, Airboy, Capt. Marvel, Green Hornet, Wonder Woman, Capt. America, Archie, Barney Google, Batman, Robin, Betty, Veronica, Dick Tracy, Gang Busters, Smilin' Jack, Popeye, Capt. Midnight, Moon Mullins, Tillie, Jiggs, Maggie, Pogo, Lulu, Felix, Albert, King, G. Bozo, Francis, Tonto, Tweety, Casper 27

Mom Pleasing Gifts

FOR MOTHER'S DAY, MAY 9TH

<p>BINKY SHIFTS SMALL Reg. \$3.93 \$2⁹⁹ LARGE Reg. \$4.94 \$3⁹⁹</p>	<p>MOTHER'S DAY MUMS 6" pot \$4⁹⁷</p>
<p>POTTED GERANIUMS \$1⁹⁰</p>	<p>SUNDRESSES Reg. \$5.88 \$4⁸⁸</p>
<p>GALVANIZED TRASH CANS \$5⁹⁷ Reg. \$7.97</p>	<p>SMOCK TOPS Reg. \$3.97 \$2⁹⁷</p>
<p>Large HANGING BASKETS \$6⁹⁹</p>	
<p>S. BROAD STREET P. H. ROSE PHONE 482-3771</p>	

FIRST ANNUAL BERTIE COUNTY MEMORIAL HOSPITAL ROAD RACE

Bertie County Memorial Hospital is sponsoring a road race on Saturday, May 15, 1982. The race will include a 6 mile run, 3 mile run, and 1 mile fun run. The runs will begin at 8, 10, and 11 A.M. with registration fees of \$5, \$3, and \$2 respectively. All proceeds will go to the Bertie County Memorial Hospital Auxiliary Fund Drive for the purchase of new patient room furniture.

All runs will begin at Bertie Senior High School on Highway 13.

NAME _____ Age _____ Sex _____
Last First MI
Address _____
T-Shirt _____ M _____ L _____ XL. (Shirts may be purchased the day of the race.)

I wish to enter the following EVENT(S):
6.2 mile run _____ 3 mile run _____ 1 mile run _____

For more information, contact Bob Reed or Neenie Whitehead at 794-3141.

WAIVER: In consideration of acceptance of this entry, I waive any and all claims for myself and my heirs against officials or sponsors of the BCMH Road Race for injury or illness which may directly or indirectly result from my participation. I further state that I am in proper physical condition to participate.

Signature _____

Please make check payable to Bertie County Memorial Hospital Auxiliary. Mail entry form and fee to Bertie County Memorial Hospital, Attention Lynn Morris, 401 Sterlingworth Street, Windsor, NC 27983.