SLI Experiments Show Bagasse Can Be Used as Effective Mulch

By Rosemary Dauterille

Southwestern Louisiana Institute has proved that bagasse, once a “problem” material, can now be used by Mr. and Mrs. Average American as one of nature’s finest soil-conditioners, insulators, and weed killers for as little as $2.00.

Until the advent of Celotex, approximately 20 years ago, bagasse - the pulp of sugar cane stock after the juice has been extracted - was either fed to cattle or used as fuel at sugar refineries throughout Louisiana.

Today, with the processing and bailing of bagasse, one can insulate, condition and effectively reduce weeds in flower beds from frost to frost with approximately two bales of bagasse. The cost is nominal, about $1 a bale when purchased at the refineries. Successful experiments with bagasse as newspaper have also opened new industrial horizons.

Experiments, conducted at Southwestern on the correlation of the insulating properties of bagasse and the reduction in soil temperatures have proved most satisfying.

Temperatures were taken one inch beneath surface soil which had been mulched with a four-inch thickness of bagasse and surface soil which had not. The measurements recorded that the soil which had been mulched was a much as 27 degrees lower.

“This is an important factor,” said Ira S. Nelson, professor of horticulture at SLI, “since plants are more sensitive to drastic changes in soil temperature than they are to air temperatures.”

In addition to insulating properties, mulched soil retain a far more uniform soil moisture content.

“So much so,” said Nelson, “that crops have been grown here at SLI without any ‘artificial’ water during some dry years.”

Probably of greatest interest to Mrs. Housewife, who spends approximately $10 a year on hand-weeding flower beds, is the use of bagasse as an efficient and economical weed killer.

While mulching does not completely eliminate weeds, Nelson pointed out, it does reduce them greatly by smothering and shading out the weeds. With many of the common weeds the reduction is as much as 90 per cent.

When a bed is to be mulched, the greatest amount of efficiency is to be had by first chemically sterilizing the ground. Such a chemical as Dow Fume MC 2 can be used for as little as 60 cents a hundred feet. This will insure a clean bed free of coco, Johnston, and Bermuda grasses at the offset.

After the bagasse has been down a year it disintegrates and has to be supplemented with a fresh supply.

“You merely add to it,” said Nelson.

With annual plants where the beds have to be prepared each year, the mulch is spaded into the soil, which adds organic matter, improves the texture of the soil and acts as a natural fertilizer.