

# Soon To Be Transformed Into Methane

Continued From Page 8-B which, according to Shih, is exceptionally rich in minerals, proteins and vitamins.

In a state which produces four million tons of chicken waste every year, this potential income would not be chicken feed. In North Carolina poultry ranks as the number one food production industry, with a gross income of \$833.8-million in 1981.

The process of turning animal waste into methane gas is not new. In Shih's native Taiwan it has been done for years using swine waste.

"Although similar work has been done on livestock waste, chicken waste is better because it is more concentrated and confined," Shih said. "The whole system is easy to adapt to a farm situation. There is a very high potential for methane production."

What is new is the development of a simple, low-cost, well-controlled method designed to maximize methane production through the use of anaerobic bacteria to break down the waste, coupled with high temperature (120 degrees Fahrenheit) and insulation.

The advantage of operating at a higher temperature is that the wastes digest more quickly, Shih explained. In other systems, lower temperatures have been used.

"Our system is not so sophisticated," Shih said. "The material is inexpensive and the process is simple."

Shih's experimental poultry waste digester is located on the N.C. State Poultry Farm on Lake Wheeler Road in Raleigh. The digestion process begins when a switch activates a scraper beneath the chicken cages, pushing the droppings along a shallow trench toward an auger, which pulls the material through an enclosed trough to an eight-inch section of pipe. There it is mixed with hot water.

This mixture, known as slurry, then flows into a specially designed cylindrical-shaped plastic bag, where it is broken down by anaerobic bacteria and converted into methane and carbon dioxide. As the digester operates, the methane and carbon dioxide inflate the bag until enough pressure builds up to allow the gases to flow out into gas

lines for metering.

In an actual farm operation, the gas could be used directly from the bag for heating needs or pumped into a pressurized tank for long-term storage.

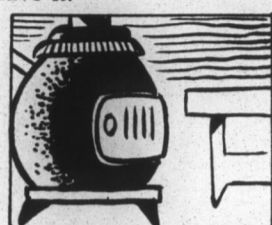
The liquid runoff from the digester is then piped into a holding pond. Since this water is rich in minerals, has a much lower biological oxygen demand and is odorless, it could possibly be used in a pond for raising fish. The separated solids can be converted into fertilizer or feed supplement for chickens, according to Shih.

His predictions of the system's economic success are based on three factors: its high rate of production,

due to a stable and sound biological system; small capital investment, thanks to the system's simple, inexpensive design; and the cost efficiency of the operation, which allows utilization of all products from the system.

"No farm has it yet," Shih said, "but its incorporation into the day-to-day operation on a typical chicken farm could take place as soon as we finish the study, which could be in two years."

"All the results are promising," he said. "I think in another five years all farmers will want to have it."



A pot-bellied stove can be an efficient source of heat if it's properly installed.

## School Menus

The Edenton - Chowan schools have released their breakfast and lunch menus for the week of Sept. 7-10.

Tuesday - Breakfast - fruit juice, doughnut and milk. Lunch - hamburger-bun, lettuce and tomato, ketchup-mustard, potato rounds, fruit cup and milk.

Wednesday - Breakfast - fruit or fruit juice, assorted cereals and milk. Lunch - spaghetti w-meat sauce, tossed salad, sliced peaches, rolls and milk.

Thursday - Breakfast - fruit juice, pancakes w-syrup and milk. Lunch - pizza, buttered corn, carrot strips, chocolate cake and milk.

Friday - Breakfast - fruit or fruit juice, sausage links, buttered grits and milk. Lunch - fish sandwich w-lettuce, tarter sauce, french fries-ketchup, pineapple and milk.

## Nightingale

Continued From Page 8-B always available in accident and disaster situations, inter-hospital transfer is the major function of Nightingale. This area is very fortunate to have this air transport system.



COMPLETE TRAINING - Chowan County residents Catherine H. Brown, Gloria H. Beckler, Audrey Granby, Pamela D. Piland, Kay F. White, and Mildred F. White were among 19 Practical Nurse Education students at College of The Albemarle who recently received caps and pins during a special ceremony that signified the completion of their 12-month training program. They will take the state licensing examination in October. From first row left are: Carla B. Chalk, Darlene M. Sanderlin, Shirley C. Williams, H. Gail Hollowell, Julie S. Palazzolo, Vicky E. Hollowell, Pamela E. Shannon, Felicia M. Rountree, and Sandra Godfrey; second row: Brown, Beckler, Carolyn B. Hollowell, Piland, and M. White; third row: Karen R. Hefferman, Granby, K. White, Cynthia A. Austin, and Roxann S. Lenard. (COA Photo)

## Allstars

The Eastern North Carolina Allstars, the defending 1981 Eastern Division Champions, are starting their 1982 football schedule with the "Richmond Bruins" - Saturday - Sept. 4, 1982 at 8 P.M. on Hicks Field, in Edenton. General admission tickets are: \$2.00.

## Fleet Reserve

The Fleet Reserve Association has set up a new branch, 378, and has just initiated an auxiliary unit for the wives of members of the Fleet Reserve.

In a ceremony held on August 21, the auxiliary's new officers were installed. The officers are; president, Christine Schock; vice-president, Maggie Stokes; secretary, Sally Davis and treasurer, Beth Koraska. The auxiliary's goals are to help the branch Fleet Reserve lobby for legislation that is beneficial toward the retired men of the Navy, Marine, and Coast Guard. They also intend to help the needy of the area.



NEW FLEET RESERVE AUXILIARY MEMBERS - The women of the Auxiliary are a recently formed group of military and ex-military wives who help lobby for legislation for the retired military person. The women are also involved in local charities.

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**New Listing**

**RIVERTON**—Attractive brick home on large lot with nice trees. House features living room, den, kitchen-dining area, three bedrooms, two baths, central heat and air. Some assumable loan at low rate. .... \$62,000.

**RIVERTON** — attractive brick home featuring, LR, Den, Kitchen - Dining Combo., 3BR, 2 Baths, Utility Room, Garage, Central Vacuum System. Some assumable mortgage at 7 1/4 per cent. .... \$62,000.

**BAYVIEW TRAIL** — Attractive brick home on large lot with trees near Country Club featuring LR, Den, Kitchen-Dining Combo, Utility Room, Rec. Room, 3 BR, 2 1/2 baths. \$58,000.

**COUNTRY HOME**—Two story home. Features LR, DEN, DR, Kitchen, utility room, sewing room, 4BR, 3 Baths. Double garage. Located on beautiful lot. \$135,000. Long term owner financing at 13 1/2 per cent.

**MORGAN PARK** — Beautiful brick home in one of Edenton's nicest neighborhoods, featuring, L.R. Den, Dining Room, Kitchen, Utility Room, 3 BR, 2 Baths. .... \$65,000.

**HISTORIC DISTRICT** — Lovely two story colonial home on corner lot. Features living room, den, dining room, kitchen, five bedrooms, garage. Easy walking distance of downtown.

**ONE MILE FROM TOWN** — Two story brick home one mile from town. Features LR, den (fireplace), dining room, kitchen, four BR, 2 1/2 baths, and garage. Located on an acre of land. 9 per cent assumable. \$69,500.

**ON CHOWAN RIVER** — Two story brick home, featuring 4 BR, 3 baths, LR, kitchen, den with fireplace plus family room. Deck overlooking the water. \$80,000 with owner financing available.

**CHOWAN RIVER** — This riverfront home features LR, kitchen, 3 BR, nice bulkheaded lot. \$48,000.

**ARROWHEAD BEACH** — This home is located on three lots. Features LR, kitchen, DR, 3 BR, 1 bath. \$19,950.

**OLD COUNTRY HOME**—Needs moving and restoring. \$4,500

**BEAUTIFUL WATERFRONT LOTS ON ALBEMARLE SOUND** — One half acre in size. Hornblow Pt. \$26,500.

**W. HICKS STREET** — Lot for sale. \$2,900. Owner financing possible.

**MEXICO RD. - FOR SALE** — This three bedroom brick home features large living room, den (fireplace), kitchen, two baths, and garage. \$49,000.

**BUILDING LOTS FOR SALE** — Commercial & Residential.