THE BATTALION Page 7 UARY 15, 1978

Methane gas made

By MARTHA HOLLIDA The energy shortage and the con-

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ern for management of livestock wastes has created an interest in methane gas production from live-

steps to stock manures, of an an "It is completely a biological pro-ess," said Dr. Donald Reddell, cost, of agriculture exas A&M professor of agriculture ingineering, specializing in animal ste management.

Converting animal wastes to thane gas involves two groups of acteria present in the waste. The dioxide. irst group breaks down waste com-ounds into soluble fatty acids. The

ther group of bacteria (which are merobic or work without oxygen) onvert the fatty acids into methane gas and carbon dioxide. Anerobic digestion haa been used

r a number of years in sewage atment, but has only been used ince the 1960s for treatment of anihal manure

"In the early 1970s people began oking into animal waste products an energy source," said Richard g, graduate student and research sistant.

The major uses of methane gas e for space heating and generating ectricity. On farms it can be used r crop drying, irrigation and operion of feedmills.

"A lot of lab studies have been unducted with one-and two-gallon raste digestors to establish operatconditions and performances of ferent types of manures," Egg

All types of livestock wastes can processed into methane gas. It kes the waste of four dairy cattle to oduce the equivalent of one gallon gasoline. Poultry waste can be werted the most efficiently, fol-

and cattle organizations. Texas A&M has been involved in and expensive.

methane gas production for a year and a half.

ble of producing 30 cubic feet of gas a day, Reddell said. He added that the gas was 50 to 60 percent

to 5 to 7 percent solids. The sludge, as its called, is then blended and pumped into the digestor, a 900 gal-lon fiberglass tank. The sludge is then heated by hot water, that runs

through coils below the digestor. A line removes the gas. 'It is a sensitive process," Egg said. "The environment for the bac-

teria is maintained best at 95 or 120 degrees Farehneit for maximum production. He added that the waste stays in the digestor for 15 out daily

The digestor was in operation at the vet school for four months last summer but was shut down to make

dead animals at the vet clinic," Egg supplies natural gas to Chicago.

Waste left in the digestor can be

the digestor buried.'

process is being conducted by the for the small farmer or rancher in-U.S. Department of Agriculture, various universities, extension offices and cattle organizations.

"The digestor has to run con-A digestor is set up at the College of Veterinary Medicine that is capaconstant use for the gas or an elabo-rate storage facility," he said.

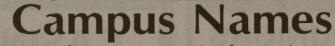
Egg said,"For a plant capable of methane and the rest carbon converting the wastes from 100 head dioxide. The manure is put in a pre-mixing tank and water is added to dilute it tank and water is added to dilute it variables.

> The University of Missouri has an operation that is capable of converting gas from the wastes of 5,000 to 10,000 head of hogs. The school has a storage system and uses the gas for heating purposes on the Missouri campus

"There is a privately-owned plant in Florida that can handle the wastes from 15,000 head of beef cat-tle," Reddell said. "The gas is used days, but some is added and taken for steam flaking their cattle feed and other management operations. The remainder is sold to a town as

some mechanical changes and to evalute production results. "During the summer we let the gas exhaust into the air after measuring its contents, but in the future we tle into gas. It's then put directly on hope to use the gas to incinerate the an interstate pipeline, which

"The energy crunch of 1973 really used as fertilizer. "It can explode, it's just like any other gas," Reddell said. "We use



an Exxon production engineer at Midland, Keese becomes eligi-ble to attend the 29th Internationale Astronautical Federation Congress in Yugoslavia this year. He graduated from Texas A&M last May.

An aerospace engineering major, Keese did the work for his award-winning paper in the Un-dergraduate Fellows Program. He earlier was one of seven regional winners across the nation. Dr. James L. Rand of the aerospace engineering faculty was

10 cadets receive 'Distinguished' status

Distinguished Military Stu-dent status has been announced for 10 additional Texas A&M seniors in the Army ROTC pro-

DMS is a prerequisite to a Regular Army commission upon graduation according to Col. James R. Woodall, professor of military science. He announced the honorees.

They are chosen on the basis of military science and academic

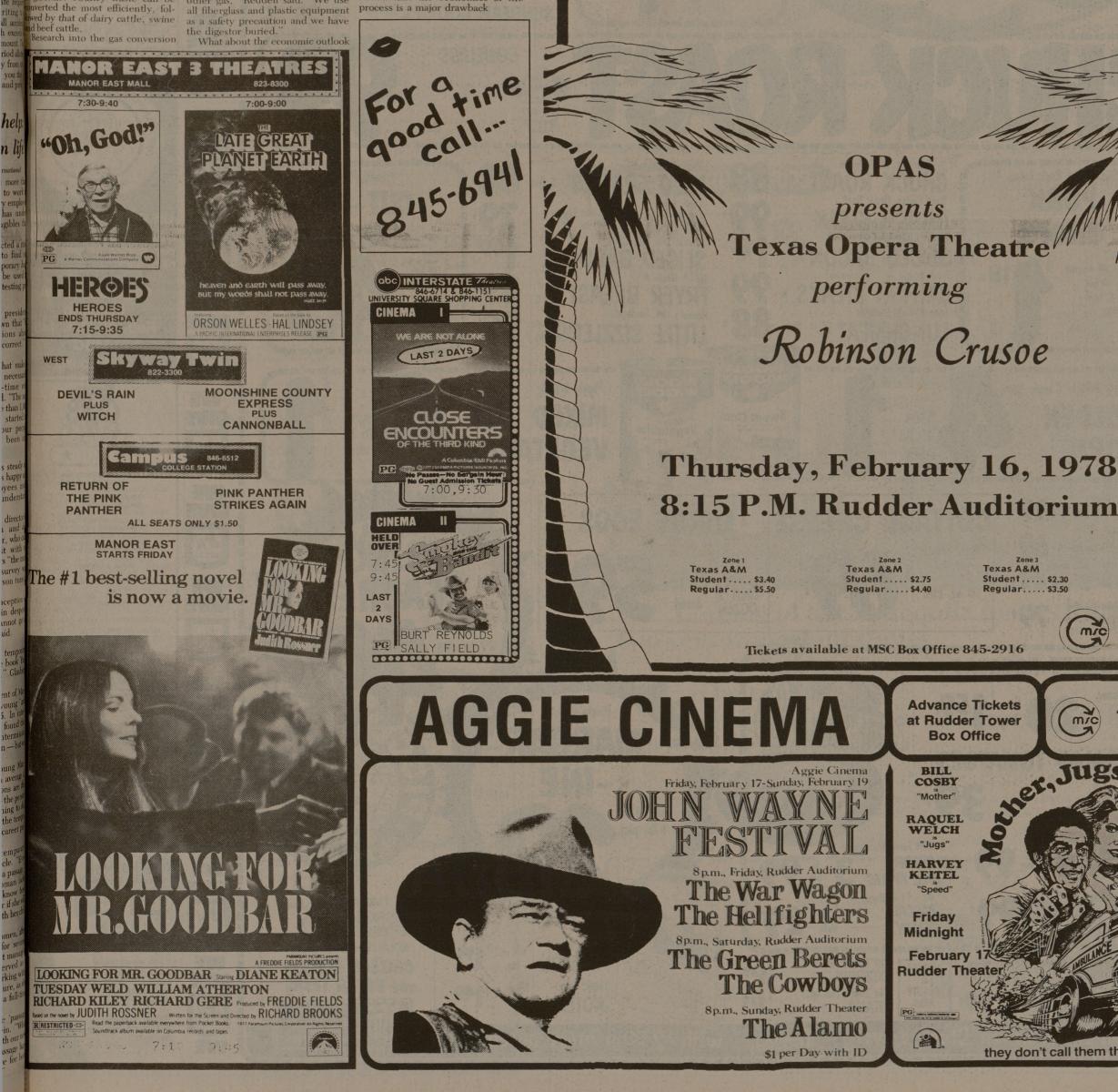
class standing, summer camp performance and contribution to the Corps of Cadets.

The new Distinguished Military Students are Joseph C. Butler of Houston; Richard L. Chastain, Killeen; Thomas M. Dreier, College Station; Charles Greco, San Antonio; Kent R.

McLemore, Jasper. Also, Kevin F. Patterson and William B. Stone III, Colorado Springs, Colo.; William Y. Porter, Waco; Robert M. Stone Ir., Seabrook, and Lee R. Wallace,

Keese's paper, "Zero Pressure Balloon Design," was chosen in the undergraduate division. Now Keese's faculty advisor. Temple BILLY **FANTASY WORLD** DISCOUNT CENTER LONE STAR **NOW HAS WATERBEDS!!** New arrivals in smoking ac-LONGNECKS BEER Water-pipes cessories. \$429 Bong's, Clips. 2919 Texas Ave. IS 1420 TEXAS AVENUE COLLEGE STATION **COMING! GOOD INTENTIONS** DON'T GO FAR WITHOUT GOOD PEOPLE SIGN UP NOW FOR INTERVIEW Schaffhauser Distributing Co. Peace Corps VISTA 846-7231 SENIORS/GRADS 101 Luther W. PLACEMENT OFFICE RUDDER TOWER 10TH FLOOR REPS ON CAMPUS-MON.-WED., FEB. 20-22 **OPAS** Texas Opera Theatre

Robinson Crusoe



Keese gets award

from space institute

student David L. Keese.

Washington, D.C.

First place in an American In-

stitute of Aeronautics and As-tronautics student paper compe-tition has gone to Texas A&M

A certificate and bronze medal

were presented him at the AIAA

national meeting recently in

Texas A&M Student \$2.30 Regular \$3.50 mic **Advance Tickets** step Into mic at Rudder Tower Sther, Jugs G. the m/c **Box Office Rudder Theate** they don't call them that for nothing!