

Corn-squeezin' taught at Kutztown State

PFU holds conference on alcohol fuel

BY SHEILA MILLER
KUTZTOWN — College students weren't the only people on the campus of Kutztown State College who were interested in alcohol last Wednesday. Over 130 farmers and others travelled from as far away as Bradford and Potter County to participate in a rap session on farm "booze".

But, this wasn't a lesson on squeezing corn for bootleggin' reasons. What these farmers were learning was how to make the white lightning that will make their tractors fly. According to the experts, the tractors would be the only things that could "drink" the stuff, anyway.

The conference was one of two scheduled to be held in Pennsylvania. "Alcohol Fuels The Farmer's Declaration of Independence" was sponsored by the Pennsylvania Farmers Union.

Leonard Zemaitis, Administrative Director for PFU, stated that the purpose of the seminar was to bring new information on the possibilities of producing fuels from farm products to interested farmers.

The seminar participants were happy with the announcement made by Dave Kirkpatrick, aid to Senator Stapleton. He informed them that Senate Bill 1011 had been passed by the Senate,

with a vote of 47 to 0, and had passed the House, with a vote of 194 to 0. It now is on the Governor's desk, waiting for his signature to make it law.

The Bill provides for the reduction of the permit fee for farmers producing alcohol for their own consumption. The original cost was \$2500, and it now would be lowered to \$25.

Kirkpatrick emphasized the fact that if the alcohol was produced and sold by the farmer, the original \$2500 permit would be required. He also pointed out that if a group of farmers wanted to go together in running a "still" to produce alcohol for their own use, the fee would be \$25.

There would be a waiting period for getting a permit, Kirkpatrick said. He estimated that it would take about 60 days to process each individual application.

This time period would be slightly longer than the time it would take to get the necessary federal permit, according to John Wawrzyniak, inspector for the Bureau of Alcohol, Tobacco, and Firearms. He said that he felt it would take around 30 days to receive the federal permit to operate a still for fuel.

But getting the permit for operating the still may be the easiest part of getting set up in the operation.

Experts on making alcohol from farm products spoke to the group. Cindy Domenico, a biologist for the National Farmer's Union in Denver, Colorado, demonstrated how alcohol was made from corn on a table-top still.

She showed how she starts with crushed corn, which is basically starch. In order to get the end-product, alcohol, these starches must first change to sugar.



Cindy keeps an eye on her table-top still. She's holding a jar of fermented "beer", a solution of corn, water, enzymes, and yeast. After the solids are strained out of the mixture, the clear solution, called wort, is boiled to distill the alcohol from the water. Cindy says that her set-up would turn any kitchen into a corn-fuel factory.

Enzymes and temperature play an important part in this process. The corn and water solution has to be heated to 200 degrees and held at that temperature for 30 minutes. The enzyme, takatherm, is added to the solution in this step.

Then, after the solution has boiled, the temperature is reduced to 140 degrees, and the enzyme, diazyme L100, extracted from black bread mold, is added.

Domenico told the group that pH, or the acidity of the solution, is critical in the production of alcohol. With litmus paper, she checks that the solution is at the proper 6.5 level.

If the solution is too "sweet", she adds either lactic or sulfuric acid; and if it is too "sour", she adds



Cindy Domenico shows the conferees "crude corn". It is put through a roller mill to be broken into small, coarse particles before being processed for fuel.

hydrated lime or a weak lye solution.

The pH of the solution has to be adjusted prior to any enzymes being added. In the step where the temperature has to be 200 degrees, a pH of

6.5 is needed; in the next step, where the temperature is reduced, the pH is also reduced to 4.0.

At this point in the process, the solution has become thin (Turn to Page 18)



Is your farm sufficiently insured? With our low rates and broad coverage you can't afford not to carry adequate amount of insurance to protect against today's inflated values. See our agent in your area.

SAMUEL G. KURTZ, INC.,

832 Chestnut St., Lebanon, Pa.

DONALD R. LONGACRE,

Route 100, Hereford, Pa.

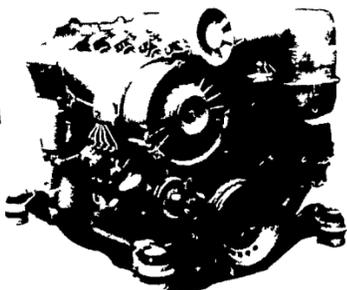
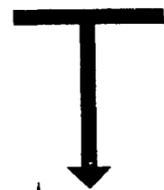
W. P. MANLEY AGENCY,

170 Prospect St., Troy, Pa.

MORRIS INSURANCE AGENCY,

Fawn Grove, Pa.

ATTENTION



DEUTZ ENGINE OWNERS

If your old Deutz engine is too tired to make it thru the winter -

HAVE IT REBUILT -

- We rebuild about 100 Deutz engines per year. All models.
- We recondition everything, including starter and generator.
- Small diesels can be rebuilt in one day.
- We also stock some rebuilt exchange engines for same-day change over.
- Our rebuilds carry a six month limited written warranty.
- Reasonably priced. Credit terms available.
- For details call our Service Department.

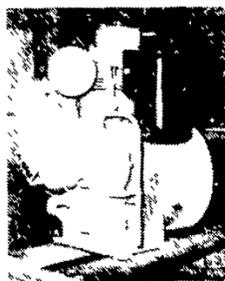
★ AUTHORIZED DISTRIBUTORS ★

Stauffer Diesel Inc.

312 W. MAIN ST., NEW HOLLAND, PA. 717-354-4181

SPECIAL SALE DIESELS

DEUTZ F1L-210



1 cyl diesel, 140 HP Max @ 3000 RPM, w/12V starter, alternator, air cleaner, belt guard, muffler, fuel tank, control panel, SAE flywheel, SAE flywheel housing (1) Unit #786
List Price A E \$1939 00

Sell **\$1279.74**

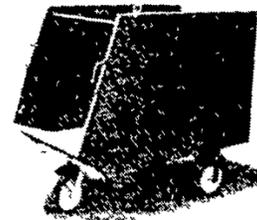
New 1973 Model DEUTZ F2L-410



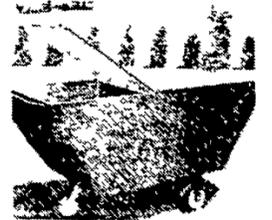
Written 6 mo or 1000 hr, 50/50 Limited Warranty 2 cyl diesels, 16 HP @ 1800 RPM, 24 HP Max @ 3000 RPM w/12V starter, generator, air cleaner, fuel pump, control panel, belt guard, muffler, SAE flywheel, SAE flywheel housing, mfg feet and heavy steel base PTO shaft included Equivalent new price \$2350 00 (1) Unit #189

Sell **\$1650.00**

SILAGE AND FEED CARTS



34" Wide, 62" Long
53" high capacity, (to feed 35 to 40 Cows)
16" Ball Bearing wheels
For very easy handling



28" wide, 60" long,
35" high capacity 600 lbs
Choice of 10" pneumatic or semi-pneumatic wheels

Many Other Sizes Available

We Also Manufacture Swivel Casters for 16", 12" and 10" wheels
MANUFACTURED AND DISTRIBUTED BY
SCENIC ROAD FARM SUPPLY

3539 Scenic Road

Gordonville, Pa 17529

—AUTHORIZED DEALER—

AARON S. GROFF & SON

RD #3, Ephrata, PA 17522

Phone: (717) 354-4631

—DELIVERIES AVAILABLE—