

# HARVEST FUEL™ ALCOHOL AND FEED PLANTS

## On-Farm Fuel Alcohol System

### Harvest Fuel: a new generation alcohol system operation designed to fit into today's farming

Harvest Fuel 451 is a six-tank alcohol production facility, designed to produce 41,000 gallons of 190 proof alcohol per year. Model 851, a 12-tank system, produces 82,000 gallons per year. Each system includes a 29' distillation column, which can distill 123,000 gallons of 190 proof alcohol per year.

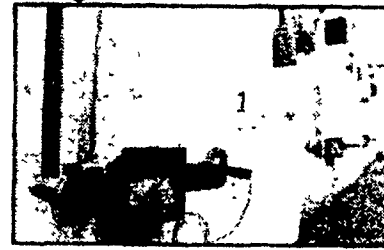
The Harvest Fuel system combines innovative alcohol technology and the highest quality hardware available: stainless steel fermentation tanks, distillation column and components, accurate electronic meters and more.

Conklin provides training and onsite technical service to all owners and operators.

Conklin fully guarantees Harvest Fuel's performance.

#### SIMPLE TO OPERATE

Harvest Fuel plants are semi-automated. Electronic controls monitor both liquid levels and tank and distillation column temperatures. Once the operator begins the process each morning, he is free to attend to other farm chores. Only two hours in the morning and two hours in the evening are required to operate the plant.



#### ENERGY-EFFICIENT

A unique heat exchange system allows the plant to heat and cool efficiently, reducing energy costs. Two-inch stainless steel tubes wrap around the inside of the tanks, creating a long-lasting form of thermal transfer.

#### HARVEST FUEL SPECIFICATIONS

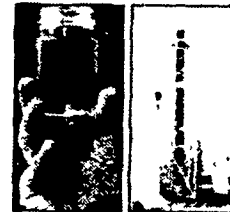
	MODEL 451	MODEL 851
Alcohol production	41,000 gal/yr (based on 360 days production, 2.3 gals./bu., 190 proof)	82,000 gal/yr. (based on 360 days production, 2.3 gals./bu., 190 proof)
Feedstocks	corn, wheat, milo or wheat-barley (recipes developed and tested as of 3/23/82)	
Amount of feedstock required	max. 50 bu./day (or equivalent starch content)	100 bu./day
Distillers grain produced	1,200 lbs./day (60% moisture)	2,400 lbs./day
Building size	1,200 sq. ft. 40' x 30' x 14'	1,800 sq. ft. 40' x 45' x 14'
Electrical system features	220 volt, 250 amp single phase service (275 kwh per day)	220, 350 amp single phase service (550 kwh/daily)
Boiler	5 h.p./350,000 BTU boiler 15 psi steam Equipped to burn fuel oil, L.P. or natural gas	10 h.p./553,000 BTU 15 psi steam
Distillation column	123,000 gal. distilling capacity/yr., 29' high, 10" diameter stainless steel column, 24 stripper plates, 20 rectifier plates	
Plant includes:	(451: 6 process tanks; 851: 12 process tanks); distillation column and condenser; solids separator system; boiler, pumps; motors, plumbing; and electromechanical sensors, and controls. The price also includes a 3-day training program and an on-site technical service start-up inspection. The price does not include shipping, on-site plumbing and electrical hook-ups	



#### FLEXIBLE

The distillation column is sized to accommodate additional fermentation tanks. A farmer who buys the basic six-tank Model 451 can simply upgrade his system to a Model 851 by adding six tanks. He does not need to change his distillation column.

The farmer can use a variety of feedstocks to make alcohol — corn, wheat, milo and wheat-barley mixtures. Additional recipes are available from the Conklin Company.



#### A COMPLETE PACKAGE

In addition to the plant's hardware, the buyer gets the benefits of Conklin's on-going alcohol technology research. Staff chemists, developing ways to improve and update the system, pass the benefits on to you.



#### HARVEST FUEL BENEFITS

- One-batch-per-process-tank system reduces handling and contamination.
- Tested under American Society for Testing and Materials (ASTM) standards
- Four years of research in controlled and on-farm sites
- On-farm fuel supply gives farmer more control of fuel costs
- Co-product distillers grains supplies high quality protein for fast-growing animals

#### NEWS BULLETIN:

##### GASOHOL SALES "SKYROCKETING"

According to recent news articles, the sale of alcohol-fortified gasoline is skyrocketing, though most motorists involved believe they're simply buying gasoline.

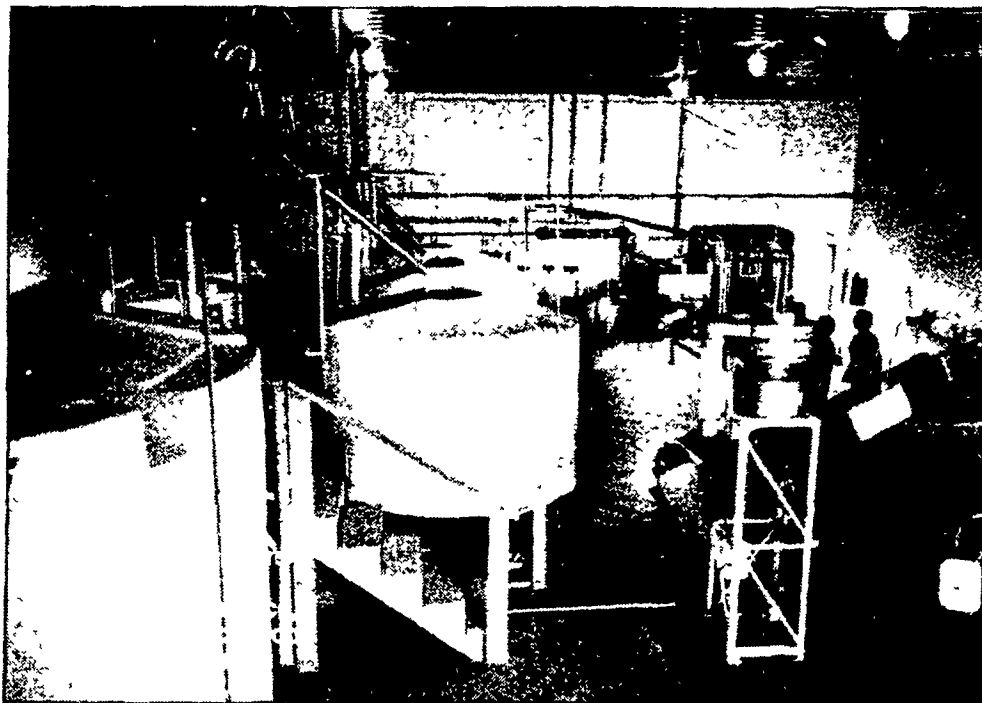
Oil industry analyst Dan Lundberg says "gasohol is not a popular name with motorists. They saw that ear of corn (used as a logo for advertising gasohol) and they didn't cotton to it. So some marketers said, "Why don't we just call it regular unleaded or premium unleaded with ethanol?"

Lundberg estimated that of the 1982 gas sales of approximately 100.7 billion gallons, 2.2 percent really was gasohol.

Gasohol - 90 percent unleaded regular gas and 10 percent ethyl alcohol - became something of an American institution after the gasoline shortages of the 1970's. People saw it as a way to reduce dependence on foreign oil and at the same time use surplus corn & other farm products as an easy source of power-producing alcohol.

According to Lundberg, "gasohol sales have been climbing dramatically even as gasoline sales have been declining." There is "nothing deceptive" about selling gasohol under other names, he says, because motorists buy gas for its octane rating, which is boosted by the addition of ethanol.

Gasohol sales could be further aided by an increased tax subsidy included in the 5 cents-a-gallon gas tax hike passed by Congress.



#### FREE ALCOHOL SEMINAR

**JANUARY 26, 1983 7:30 P.M.**

**Treadway Resort Inn  
222 Eden Rd. Lancaster, PA**

- Reading the financial analysis computer print-out.
- Explaining alcohol related tax issues.
- Permit requirements.
- Alcohol marketing & why demand for alcohol is mushrooming.
- Feed values.
- Plant operation & its versatility.
- Qualifying customers most able to purchase & profit from a Harvest Fuel plant.
- On-farm use of alcohol!
- Detailed procedures on completing this transaction.

For reservations, call James A. Lentz  
(717) 665-2809

## JAMES A. LENTZ

Area Mgr.



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