



This specially-rigged Chevy station wagon traveled from Florida to California on wood fuel. The wood-to-gas generator trails behind and powers the car about 150 mi. per 100 lbs. of wood.

## GOES 100 MILES ON 150 LBS. OF WOOD

# Wood-Burning Car On Cross Country Tour

A wood-burning car has been driven across the U.S. — from Jacksonville, Fla., to Los Angeles, Calif. to demonstrate that wood-gas generators are feasible for cars, pickups and tractors.

With its fuel gauge reading "Untreated Wood Only," the car traveled along at 60 mph or slower, went 100 miles on about 150 lbs. of wood chips or blocks, and didn't pollute because of the absence of hydrocarbons in wood. It could travel about 400 miles without having to stop for a new wood supply.

Called ECAR by its developer Ben Russell, president of ECON (Energy Conservation Co.) of Alabama, the car is a 1979 Malibu station wagon. It pulled a 600-lb. trailer-mounted, wood-gas generator.

Says Gary Chatham, of ECON: "We feel the best future applications of this concept will be concerned with

agricultural and forestry vehicles, where scrap wood fuel might be both locally available and cheap, if not free, and in connection with stationary engines, such as electrically-powered generators and pumps, both of which have important applications in agriculture and forestry."

The cross-country trip was made on about a cord of wood. A shoebox full of ashes had to be disposed of daily.

The wood-burning reactor takes about 19 minutes to heat up and start making gas so that the car will start.

No modification to ECAR's gasoline engine itself was necessary. However, the conventional gasoline carburetor was replaced by an air-bending chamber. Because the gas produced can't be stored, it must be used as it's generated.

The wood-gas generator is a reactor

which partially combusts a solid fuel, wood in this case, to a gaseous state, Russell explains.

Actually, any type of biomass having 30% or less moisture content can be used. The material is introduced into the system from the top and flows down through a drying zone, then it's partially burned. There is no open flame. Air is introduced into a combustion zone and the resultant gases flow downward toward an opening in the bottom of the system.

The wood-gas generator system does not in any way relate to a steam boiler, Russell points out. "It is a reactor which breaks down solid biomass fuel into a vaporous state, not gasoline or alcohol. The gas which is burned to produce power in the engine is CO and H<sub>2</sub>, or synthesis gas, which is only about 15% as

strong as natural gas. It is not as potent as gasoline fuel, but does produce 60% as much power as gasoline, which is adequate for automobiles — lacking only acceleration and high speed," explains Russell.

He adds that the car could be adapted to run on either gasoline or wood-gas, although such a system has not been perfected.

For persons wanting to build a wood-gas generator for a car, Russell estimates the cost at \$3,000 to \$5,000.

For more information, contact: FARM SHOW Followup, ECON, Box 828, Alexander City, Ala. 35010 (ph 205 329-8424).

## ATTACHES TO PLANTER WITH SINGLE BOLT

# New Depth Control For Cyclo Planters

If you own an International Cyclo planter and want to be able to more accurately control working depth, you'll be interested in the new E-Z Depth attachment from Brown County Mfg., New Ulm, Minn.

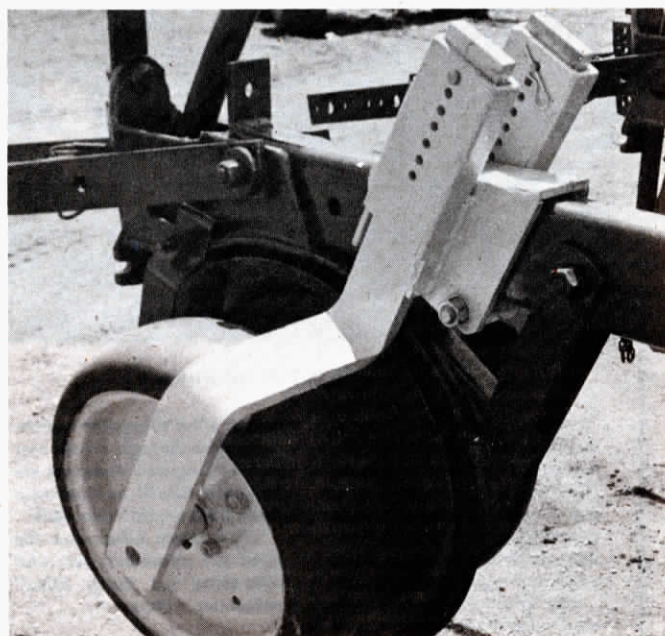
A single bolt attaches the E-Z Depth to the planter right next to the opener disks. Its two rubber gauge wheels can be adjusted to control depth from zero to 5 in. deep. Tires can be ordered with the attachment, or IH Posi-Depth tires can be used instead. Besides controlling depth, the E-Z Depth also helps firm soil next to the seed trench for better soil-to-seed contact and improved germination.

"The E-Z Depth offers you many of

the latest planter concepts at a fraction of new prices," explains Tom Peterson of E-Z Products. "It varies from some other similar attachments in that it attaches back on the planter further and it's positively mounted rather than spring-mounted. We feel it offers better depth control and improved germination."

The E-Z Depth is available for \$162 per row, or \$108 without the gauge wheels.

For more information, contact: FARM SHOW Followup, E-Z Products, Brown County Mfg. Co., Box 531, New Ulm, Minn. 56073 (ph 507 359-2352).



A single bolt attaches the E-Z Depth next to the opener discs.