

MADE FROM BLACK PLASTIC-LIKE FABRIC

"Instant Shade" Shelters For Cattle, Hogs, Horses

"They're catching on fast," says Donovan Enterprises of its portable or permanent shade shelters for cattle, hogs, horses or poultry.

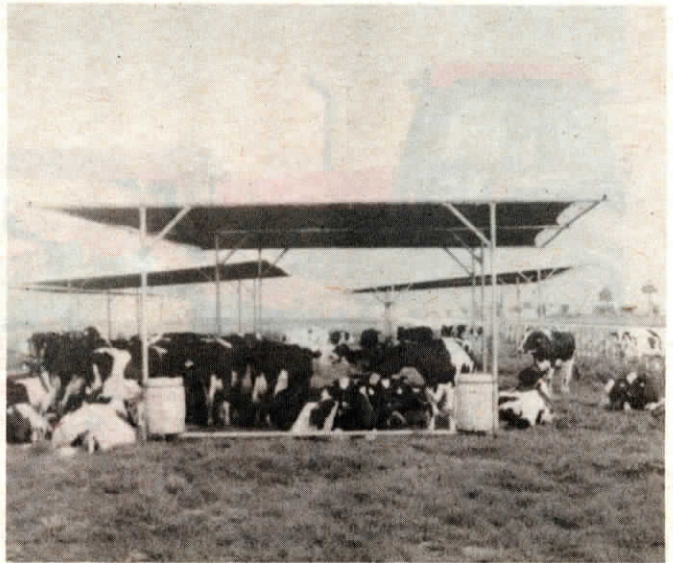
Made from black polypropylene plastic-like fabric which resembles window screen, the low-cost shelters provide "instant shade" for a fraction of the cost of conventional building materials, notes Michael Ciferri, president.

"One person, working alone, can erect a portable or permanent shelter in a matter of hours," says Ciferri. He recommends using 80% density material which blocks out 80% of the sun, yet permits wind and rain to pass through.

"The material won't rot or shrink and will last 10 or more years when properly installed," says Ciferri. For cattle, he recommends about 50 sq. ft. of shade area per animal, and about one-third of that for hogs.

Cost of the fabric is right at 25 cents per sq. ft. It comes in stock sizes 10, 12 or 20 ft. wide and in lengths from 20 to 50 ft. Larger sizes can be custom ordered. Panels are furnished with metal grommets every 12 in. for easy installation on metal or wooden frames.

For more details, contact: FARM SHOW Followup, Donovan Enterprises, 2951 S.E. Dominica Terrace, Stuart, Fla. 33497 (ph 305 286-3350).



Typical shelters block out 80% of the sun, yet are porous enough to let wind and rain pass through.

NEVER SHAKES LOOSE

Magnetic Hitch Pin

"I've used it on my own farm for over a year and it never shakes loose," says Bill Pavlak, Hopkins, Mich., who's invented a new magnetic hitch pin that's held in place with a strong magnet.

The magnet fastens permanently near the top of the pin, eliminating the need for a clip at the bottom. Although it holds the pin tightly in place — you can even put the pin in upside down — it easily removes by hand. It's available in $\frac{3}{8}$, $\frac{1}{2}$, and 1-in. dia. sizes. The $\frac{3}{8}$ -in. size sells for \$10.50.

For more information, contact: FARM SHOW Followup, JBL Enterprises, 1876-130th Ave., Hopkins, Mich. 49328 (ph 616 681-9878).



Magnetic pin can even be installed upside down.

WON'T RUST OR ROT

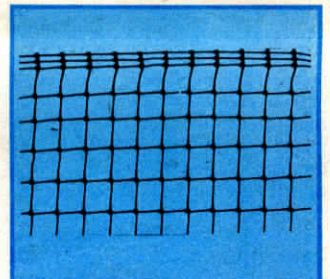
"Bird Proof" Netting For Farm Buildings

If you've been looking for a low-cost way to keep birds out of open-front buildings, new plastic netting from Agri-Plastics may be the answer.

"It's exceptionally strong, yet lightweight and easy to install," notes Ray Johnson, president. "Unlike chicken wire, it won't rust and is easier to handle."

The $\frac{3}{4}$ -in. mesh netting (black in color) comes in 300-ft. rolls in 4 to 16-ft. and widths. A 16 by 300-ft. roll sells for \$152.

Contact: FARM SHOW Followup, Agri-Plastics, 64834 County Road 27,



Goshen, Ind. 46526 (ph 219 533-0497).

"HIGH THERMAL EXPANSION" BOOSTS GAS MILEAGE "UP TO 50% OR MORE"

Fuel-Saving Conversion For Truck, Tractor Engines

"We alter expansion factors in tractor and truck engines by installing turbochargers and reworking the camshaft, compression ratios, and governor ratios," says Stoney Pipes, Rocheport, Mo., who runs "The Power Squeeze Company" — a custom engine rebuilding outfit that reworks conventional engines into "high thermal expansion engines," boosting gas mileage "up to 50% or more."

Pipes contacted FARM SHOW after reading about Utah inventor Mike Brown who rebuilds engines by installing remanufactured camshafts and 16:1 compression pistons to boost gas mileage by up to 50% on many vehicles (Vol. 10, No. 1). Brown has worked primarily on cars and pickups. Pipes, a former Allis-Chalmers Co. mechanic, says he has

successfully converted tractors and semi-truck engines for years.

"Several years ago a farmer brought me a 7000 series Allis Chalmers tractor that had problems with overheating, cracked heads and short-lived injectors. I decided to experiment by regrinding the camshaft. That eliminated all problems related to excessive heat and the farmer said it burned less fuel. I later obtained different pistons, sleeves and rings and converted a 7060 Allis-Chalmers. We installed a reworked camshaft, along with the new pistons, and horsepower was boosted and fuel consumption was cut by more than 60%. Since then, I've changed over 14 more engines of different brands and all have produced similar results, including an 855 cu. in. Cummins semi engine which doubled mileage on an

18-wheeler from $3\frac{1}{2}$ mpg to $7\frac{1}{2}$ mpg," says Pipes.

The cam is reground so that it leaves the intake valve open halfway through the compression stroke and begins opening the exhaust valve before bottom dead center on the power stroke. This lets the fuel mixture expand twice as much and decreases the amount of compression at low rpm's and increases it at high speeds.

Because of the increased expansion, Pipes rebuilds the turbo charger with a large housing and wheel to boost air flow and changes the governor ratios to adapt to the other changes.

"The changes decrease exhaust temperatures and increase engine efficiency by 40 to 50%. Engine wear is greatly reduced and we've been able

to lower fuel consumption on Allis Chalmers 301 engines from 8 gal. per hour to 4 gal. per hr. doing field-work," says Pipes.

The biggest problem with converting gas engines, according to Pipes, is that the no-lead gas currently on the market doesn't work as well as leaded gas in high-compression engines. Conversion of gas engines costs about the same as a normal overhaul. Cost to completely modify an AC 301 diesel tractor engine is about \$4,000, or the cost of an engine rebuild.

"Every manufacturer in the country should be building engines this way right from the factory," says Pipes.

For more information, contact: FARM SHOW Followup, Stoney D. Pipes, Rt. 1, Box 49A, Rocheport, Mo. 65201 (ph 314 698-3995).