

More reduced tillage corn research needed

DES MOINES, Ia. — Do some corn hybrids really perform better under reduced tillage than those for which no such claims are made? All available studies say "no", according to Bob Seifert, Director of Corn Breeding for Pioneer Hi-Bred International, Inc. However, it should be possible to develop hybrids with superior performance potential in conservation tillage environments, he said.

In a paper presented at the 1983 annual meeting of the American Society of Agronomy in Washington, D.C., Seifert said the absence of any real differences should not be considered surprising.

"While hybrids currently being grown were selected and evaluated under conventional tillage systems", he said, "breeders have been working for years to improve germination, seedling vigor, disease resistance, insect resistance — all traits which are important to plants grown under conservation tillage."

Still, Seifert pointed out, there is an opportunity to develop genotypes which could be superior in reduced tillage system to those

available today. And, given the continuing growth in conservation tilled-acreage, there is a definite need for additional research in this area.

The two most important traits on which corn breeders should concentrate are high germination and strong seedling vigor, Seifert said. Those characteristics equip the plant to handle several of the additional stresses associated with reduced tillage. The most common of these are the colder, wetter conditions that result from additional plant residue on the soil surface. But strong germination and early growth can also be a distinct advantage in competing with potential weed problems in conservation tillage environments.

One area of research which has received little attention but which could provide important information is in the area of roots.

"Given the whole environmental package of wetter soils, lower temperatures, and different fertilizer placement", Seifert said, "we might theorize that a horizontal, spreading, fibrous root system would have some advantages over a more vertical root system in a no-till system."

Corn hybrids with roots that grow rapidly in cold soils would also appear to be a fruitful area for study, Seifert added, even though there are currently no data suggesting any advantage.

He acknowledged that there may be special problems with diseases and insects under conservation tillage, but cautioned breeders against assuming that relationships are simple and straightforward.

"It's important to recognize that surface residue has the potential to increase some diseases, but the incidence and severity of others may decrease or not change. The same principle applies to corn insects. Additionally, there are interactions in which one disease may predispose corn to another disease. The result is that these relationships are a complex of various interacting factors rather than one of simple cause and effect."

Seifert concluded his remarks by listing his recommendations for conservation tillage corn breeding:

1. Set priorities on amount of effort to be put into breeding and testing for conservation tillage

hybrids.

2. Set priorities on the hybrid characteristics which are most important for your area of responsibility.

3. Use special evaluations for germination and seedling vigor - plant early, use untreated seed, and laboratory cold tests.

4. Use special evaluations for diseases and insects - artificial inoculation/infestation and special

nurseries where diseases/insects are present.

5. Consider doing a part of both breeding and testing effort under a conservation tillage system - no-till preferred.

6. For breeding and testing effort under conservation tillage use proper research equipment, good agronomic practices, and select fields carefully.

Gordon gets agri-loan post

HARRISBURG — Commonwealth National Bank announces the appointment of Alma A. Gordon, Lancaster, as agri-loan credit and operations manager in the bank's Agri-Loan Department; she previously was Lancaster Region commercial lending administrator. Her office will remain at the bank's Lancaster Region headquarters, 28 Penn Square.

Gordon joined the bank in a clerical post in 1959 and by accepting posts with increasing responsibility was promoted to loan administrator in 1970. She was named operations manager for the Lancaster Region commercial

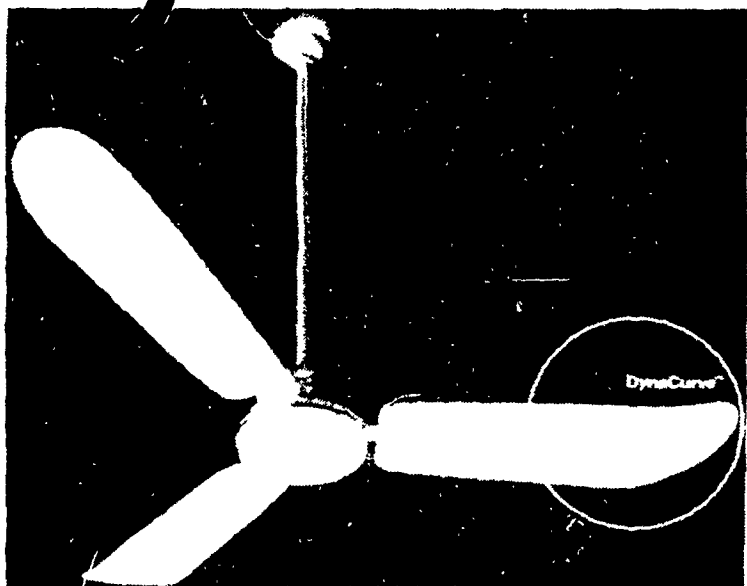
loan area in 1972, and commercial lending administrator in 1977.

A 1973 graduate of the Pennsylvania Bankers Association's School of Banking at Bucknell University, Gordon attended Penn State and has pursued studies through the American Institute of Banking. She is a 1958 graduate of Lampeter Strasburg High School.

Gordon is chairman of the Lancaster-Lebanon Chapter of the National Association of Bank Women.

A native of Lancaster County, Gordon resides in West Lampeter Township.

DynaFlow™



56" - METAL BLADES

ROTOR is made of electrical sheet steel stampings. The conductors consist of copper bars in slots riveted to the copper and rings and soldered. The rotor is spigoted with the bearing brackets. The endshield of the rotor is fixed by three steel screws and nuts to the rotor body.

STATOR is made of electrical sheet steel stampings which hold rigidly in position on to the steel shaft. Synthetic enameled copper wire is used for windings thoroughly impregnated with varnish and stoved. The slot insulation consists of varnished cambic and a wedging strip of fiber.

CAPACITOR is mounted between the fan and downrod for reducing consumption of electricity and longer service.

METAL BLADES 1/16" thick

BEARINGS are lubricated with quality grease. The entire weight of the revolving portion of the fan is taken by the ball bearings.

SPECIFICATIONS

Sweep	56"	Amps at full speed	0 38
Downrod	30"	RPM bottom speed	90
Watts Consumption full	82	Amps at bottom speed	0 22
Volt — amps at full speed	84	Air delivery (CFM) full speed	16,500
Power Factor	0 95 1	Maximum air velocity Ft /M	650
RPM at full speed	280	Gross Weight	32 lbs

SPECIAL PRICE \$79⁰⁰

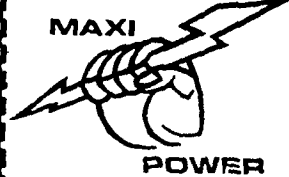
7 Year Warranty

SWINE & POULTRY SYSTEMS SPECIALISTS

FARMER BOY AG. INC.

410 E LINCOLN AVE. MYERSTOWN, PA 17067 PH 717-866-7565

Quality Is Our Name - Low Price Is Our Aim

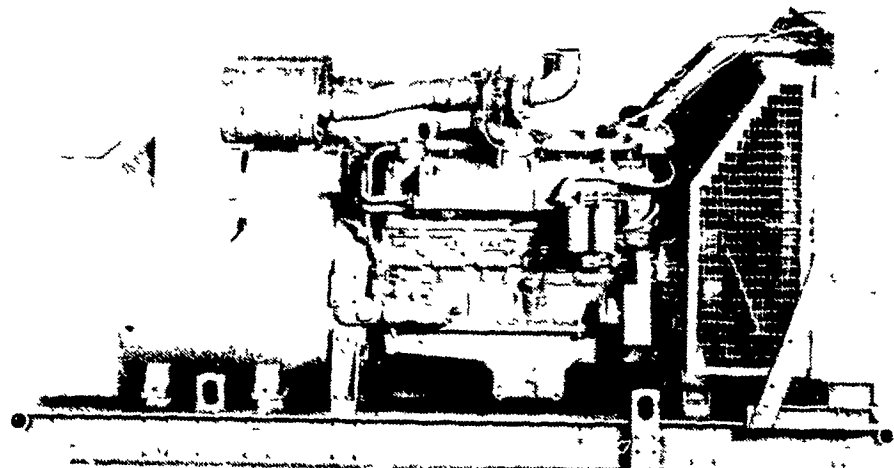


Generator Sets

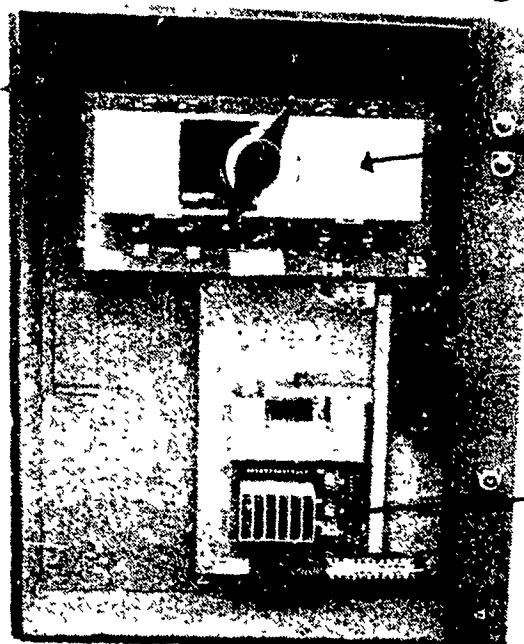
Manufactured for Agriculture

• Air Cooled Units: 2 - 20 KW

• Water Cooled Units: 7.5 - 1000 KW



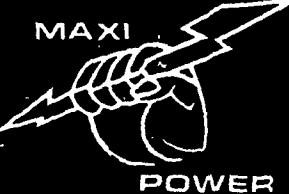
Maxi-Power Generator has over 325 automatic units in South Eastern Pa. Why not check with the leader before buying!



Automatic Transfer

Solid State Control Logic

Automatic Transfer Switch



— THE ORIGINATOR OF AGRICULTURE SWITCH GEAR —

MAXI-POWER GENERATORS

330 FONDERWHITE RD., LEBANON, PA 17042
LEONARD MARTIN CO. 717-274-1483

★ RADIO DISPATCHED TRUCKS ★ 24 HOUR SERVICE