

## Agreement reached on coccidiosis research

BELTSVILLE, Md. — Genetically engineered proteins, required as a first step in devising a potential vaccine against a serious disease of poultry, will be produced by three companies under an agreement with the U.S. Department of Agriculture.

Harry D. Danforth, microbiologist with USDA's Agricultural Research Service, said today that the joint venture's goal is to develop a broad-range vaccine against coccidiosis. This parasitic intestinal disease an-

nually costs the U.S. poultry industry more than \$150 million in direct losses and about \$100 million for anticoccidial drugs, he added.

Joining USDA in the agreement are Hoffman-La Roche, Inc., Nutley, N.J.; Genex Corp., Rockville, MD.; and Vineland Laboratories, an affiliate of Immunogenetics, Inc., Vineland, N.J.

According to the agreement, proteins called antigens will be produced by use of monoclonal

antibodies furnished by USDA's research agency, Danforth said.

Agency researchers are producing these antibodies via the hybridoma technique wherein spleen cells from mice inoculated with the coccidial parasite are fused with mouse cancer cells grown in cell cultures.

Fused cells resulting from this biotechnology not only possess the immortality of cancer cells but also manufacture identical antibodies that react with specific forms of chicken coccidiosis,

Danforth said.

Danforth and his colleagues at the Poultry Parasitic Diseases Laboratory here have produced monoclonal antibodies against several species of coccidiosis. Their work, reported last year at a meeting of the Poultry Science Association, was considered the first step in formulating a vaccine against the disease.

The agreements to produce the antibodies were executed here on June 29 by William H. Tallent, administrator for the Northeast

Region of ARS; L. Patrick Gage for Hoffman-La Roche; Joseph G. Perpich for Genex Corporation; and John F. Bradley for Vineland Laboratories.

All three companies in the project had responded to a government request for proposals published in Commerce Business Daily, Danforth said. Each agreement, or memorandum of understanding, defines procedures of USDA-industry cooperation, but does not transfer funds between any of the parties.

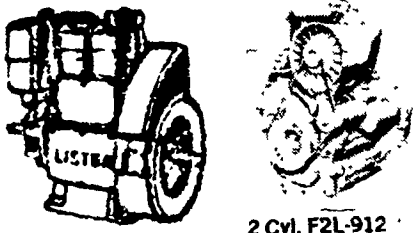
# EGGS FOR ENTERTAINMENT

## SMUCKER'S SALES & SERVICE, INC.

RD #2, BOX 21  
NEW HOLLAND, PA 17557

### LISTER, PERKINS & DEUTZ DIESELS

- Good used diesel engines
- New Sputnik wheels & parts

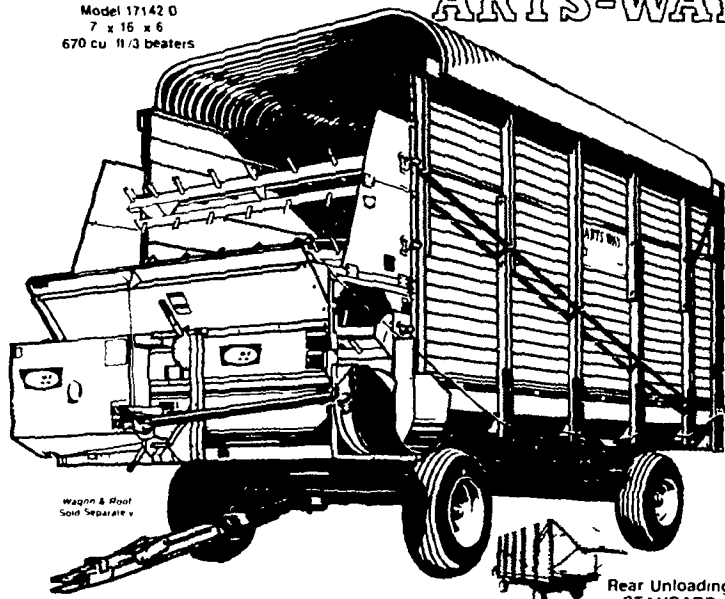


2 Cyl. F2L-912

**FOR PROMPT SERVICE CALL  
717-354-4158 OR IF NO ANSWER  
CALL 717-354-4374**

## Which Box Gives You More Great Features as Standard Equipment?

Model 17142 D  
7 x 16 x 6  
670 cu. ft. 1/3 beaters



The only way to get real convenience features on most forage boxes is with extra cost options. But Arts Way builds them in for you as standard equipment.

Features like rear unloading. Variable-speed unloading with a 4-chain bed conveyor. A separate beater clutch. And a smooth worm-gear drive that eliminates surge. Features that make this a one man machine.



PLUS 9' flexible front conveyor chute extension. Rugged wood box that stands up to rough field use better than all steel boxes. 4-chain bed conveyor and more — all STANDARD equipment.

**COME IN TODAY FOR A DEMONSTRATION**

**AREA REPRESENTATIVE**  
**DAVID D. DIETRICH** PHONE:  
Rte. 5, Box 758 (703) 667-3787  
Winchester, VA 22601 (703) 667-0363

**HAMBURG, PA**  
Shartlesville Farm Service  
215-488-1025

**ROME, PA**  
Histsands Farm Centers  
717-744-2371

**WAYNESBORO, PA**  
B Equipment, Inc.  
717-762-3193

**FREDERICK, MD.**  
Knott and Geisbert  
301-662-3800

**ALEXANDRIA, PA.**  
Clapper Farm Equip.  
814-669-4465

**CANTON, PA.**  
Hess Farm Equipment  
717-673-5143

**RISING SUN, MD.**  
Ben Haines  
301-658-5359

**STOP BY OUR EXHIBIT AT FORAGE & DAIRY DAY  
JULY 19, MILTON HERSHEY SCHOOL FARMS**

**MILLER  
DIESEL INC.**

6030 Jonestown Rd.  
Harrisburg Pa. 17112  
717-545-5931  
Interstate 81 Exit 26

**ASSOCIATION OF  
DIESEL SPECIALISTS**

**DIESEL FUEL INJECTION AND  
TURBO-CHARGER SPECIALISTS  
LOCALLY OWNED AND  
OPERATED SINCE 1957**

Authorized Sales & Service For:

|              |            |
|--------------|------------|
| ROBERT BOSCH | AIRESEARCH |
| ROOSA MASTER | RODOMASTER |
| CAV-SIMMS    | SCHWITZER  |
| BENDIX       | HOLSET     |

UNITED TECHNOLOGIES  
(Formerly American Bosch)

We Also Service:

IHC \* Caterpillar \* Cummins  
Bacharach Tools \* Murphy Switches  
Detroit Injectors Blowers & Governors  
Alert Water Separators \* Isspro Pyrometers  
Stewart Warner Gauges \* FPPF Diesel Fuel Products

Daily shipments by UPS, Parcel Post, or  
our representative who is in  
area regularly

**almac's got  
bad news for  
garden pests!**

**BIRD CONTROL NETTING**  
Not affected by rot. Black polypropylene is stable many years outdoors. Rolls or folds flat for easy storage. 14 ft or 17 ft wide. Available in 50 foot to 5,000 foot lengths.

**5/8"x3/4" MESH Price List - 1983**

|          |          |
|----------|----------|
| 14 x 50  | \$ 17.75 |
| 14 x 75  | 26.50    |
| 14 x 100 | 35.25    |
| 14 x 300 | 83.50    |
| 14 x 500 | 118.00   |

Above packaged for prepaid UPS

|           |        |
|-----------|--------|
| 14 x 1000 | 175.00 |
| 14 x 5000 | 580.00 |
| 17 x 5000 | 690.00 |

Above rolls not for freight collect  
Prices subject to change

**almac plastics inc**  
Baltimore Branch  
6311 Erdman Ave. Baltimore Md 21205  
301-485-9100  
Va /W Va 1-800-638-5452 toll-free  
Atlanta 523-6377

## Quality...

**... for business ...**

Yes, Morton Buildings designs and erects all types of buildings!! To meet your building needs — from farm buildings to those designed for industrial use — trust Morton Buildings. You'll recognize our

quality workmanship, construction and appearance — with a strong, written warranty to back it up — in every Morton Building. Bring your building plans to us, we'll show you why

a Morton Building is a must for your operation. Our sales team will explain in full detail the Morton Building best suited to your farm and business needs. Call or write today!!

**... and farm!**

**YEAR-ROUND CONSTRUCTION**

**FREE WEATHER VANE  
with every building  
purchased!**

For information call 24 hr toll free 800-447-7436

**MORTON BUILDINGS**

80 Yrs. of Service to the American Farmer

Call or write today for more reasons why you should own a Morton Building.

Send more information on MORTON BUILDINGS

Have your salesman phone for an appointment

|  |   |
|--|---|
| <input type="checkbox"/> Commercial & Industrial | <input type="checkbox"/> Horse Barns        |
| <input type="checkbox"/> Machine Storage         | <input type="checkbox"/> Dairy Barns        |
| <input type="checkbox"/> Garages & Shops         | <input type="checkbox"/> Livestock Shelters |
| <input type="checkbox"/> Airplane Hangars        | <input type="checkbox"/> Riding Arenas      |

Name \_\_\_\_\_

Address \_\_\_\_\_

Phone No \_\_\_\_\_

1185 York Rd  
Gettysburg, PA 17325  
Rd #10, Box 76  
Meadville, PA 16335  
State College, Box 361  
Centre Hall, PA 16828  
Box 126  
Phillipsburg, NJ 08865  
1918 Industrial Drive  
Culpeper, VA 22701

Ph 717/334-2168  
Ph 814/336-5063  
Ph 814/364-9500  
Ph 201/454-7900  
Ph 703/825-3633