

As USDA Completes First 100 Years

60s Decade of Progress

Research helped make the 1960's a decade of development in all phases of agriculture — technology, production and distribution.

There were advances in fertilizers, seeds, feeds and planting practices (such as narrow-row corn) which increased yields. The laboratories yielded flame-

proof fiber treatment, wash and wear fabrics, advances in dehydration methods for coffee, fruits, vegetables, meats and dairy products.

And specialists helped design new models of packaging, distribution and store layout.

The 60's also saw marked improvements in USDA's continuing program of crop reporting—improved data processing and the use of new techniques such as aerial photography and remote sensing from space, according to the USDA.

Formula feeding of livestock and poultry developed in the 1960's. Minerals, antibiotics and other microingredients were added to concentrated feeds, boosting livestock gains more efficiently and economically to answer rapidly growing demand.

Increased consumer appetites for meat, a growing population and larger personal incomes have spurred the increased production of meat and poultry. The 1960's also saw shifts in feedlots and poultry farms south and west of the Corn Belt.

New grain developments emerged in the 1960's. New short-stemmed rice varieties have boosted production since 1967, both in the United States and in lands such as India, Pakistan and the Philippines.

An international effort, the rice research was supported with both public and private funds. The new strains of rice were derived from Asian grain, planted

in experimental fields of the International Rice Research Institute in the Philippines.

"Mexipak" and similar new varieties of wheat, another international development, paralleled the success of the new varieties of rice, and helped boost grain yields in developing world areas.

Soybeans became the U.S. farmer's big success crop of the decade, as world demand for oil and protein expanded. Growers found many new varieties of soybeans, developed for different climates, a profitable substitute for more traditional crops.

Important genetic discoveries also came from the laboratories in the 1960's. For example, USDA's Beltsville facility produced "fatherless" turkeys — born by parthenogenesis that is from the double chromosomes of unfertilized hens' eggs. Parthenogenesis, they found, also occurs in other poultry. (However, parthenogenic offspring aren't robust enough for commercial production.)

The laser beam is also making its mark in agriculture. USDA devised a method of using lasers to keep machines on a straight course while laying continuous plastic tubing for field drainage.

And in the 1960's innovations were introduced in food packaging and marketing. Industry, government and universities all contributed to this progress.

Food laboratories have produced processes including freeze-drying, dehydrofreezing, vacuum and spray-foam drying of laminations of plastic, paper and foods. Freeze-dried food items gained shelf space in the 60's, as demand for convenience forms advanced.

Other new "market accepted"

foods include: boil-in-the-bag foods, low-calorie diet foods, instant dry skim milk, potato flakes, sweet potato flakes, artificial sweeteners, freeze-dried coffee, mixes, salads, egg mixes, cheese dip, mixes for making milk shakes, salad, gravy, custard, cake, bread, biscuits and rolls, artificial orange juice, artificial milk shakes and other dairy products, snack foods, imitation flavors, and nutritional supplements including protein supplements.

Many new foods now feature built-in "chef service" and "maid service." This means different and higher quality convenience foods are now available that are better than the busy housewife usually has the time to prepare.

One recent study estimates that items introduced in the last decade accounted for 55 per cent of items handled and 52 per cent of sales.

Further techniques in packaging and transportation have brought greater efficiency and economy in food handling. Such improvements have resulted from general use of the bulk box, fork lift truck and automatic dumping equipment. "Big John" bulk freight cars, unit trains, adaptation of carbon dioxide or liquid nitrogen as cooling agents for refrigerated trucks and improved equipment for air transport.

New packaging techniques popularized in the 60's include aluminum containers, new lightweight steel cans, tab-pull openers, food pouches of combined laminations of plastic, paper and foil, flexible films, and plastic containers.

For stock control there is a new computerized checkout in-

(Continued on Page 32)

LONG'S MOWER SERVICE & SALES

Lititz R. D. 1, Pa. 17543 626-8180

Anniversary Sale

APRIL 16 to 25

Turfmaster & Gilson Dealer

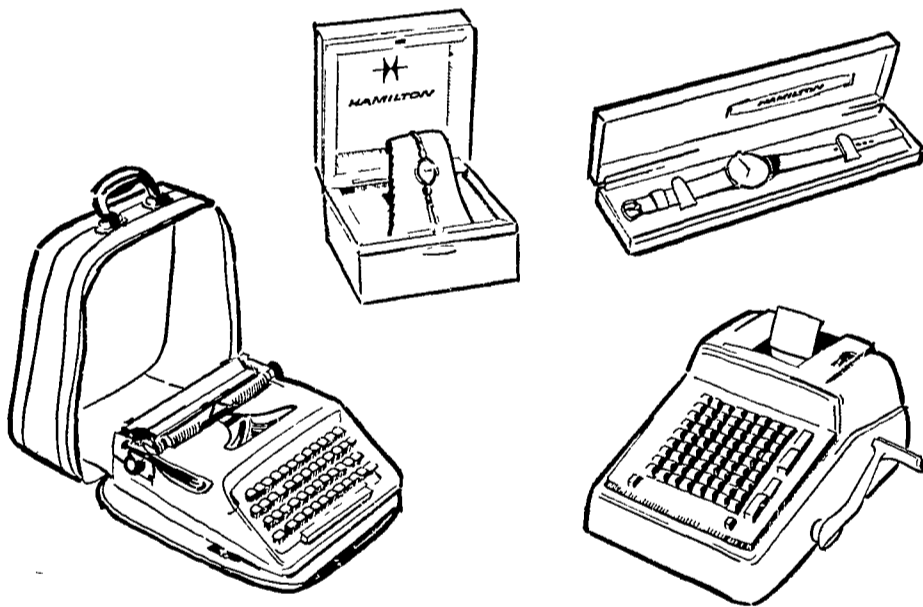
Tractors 5 to 14 HP.
Rotary Mowers and Tillers 3½ to 8 HP.
Garden & Lawn Supplies

Lil Indian Mini Bikes and Karts
Remington Chain Saws
Flower and Vegetable Plants

SPECIALS DURING SALE

Come in to Register for Door Prizes.

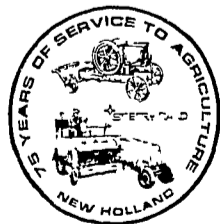
Hours: 6 to 10 weekday evenings
During Sale 9 to 5 Saturday.



WHICH ANNIVERSARY GIFT FOR YOU?

This year, New Holland celebrates its diamond anniversary... 75 years of service to agriculture. You can join in the celebration by taking advantage of our Diamond Anniversary Bonus program during April and May. When you buy a new New Holland baler, precision-cut forage harvester or Haybine® mower-conditioner, you'll receive a special

gift. Take your choice of one of the following: Man's diamond-set, 17-jewel Hamilton wristwatch, lady's diamond-set, 17-jewel Hamilton wristwatch, Remington® adding machine or Remington portable typewriter. But remember, Offer is good only during April and May. Stop in soon for complete details.



NEW HOLLAND
DIVISION OF SPERRY RAND

C. E. WILEY & SON, INC.

101 South Lime Street
Quarryville, Penna.

Phone — 786-2895

be as sure ... as you can be!

tie your profits to

LASSO®

by Monsanto

Plus

ATRAZINE

for CORN

the most versatile annual grass and broadleaf weed killer combination on the market for CORN!

LASSO® Plus ATRAZINE

gets the job done . . .

with or without incorporation, without crop damage and with reduced carryover possibility; in all soil types from sands to clays

Can be applied with liquid nitrogen or fertilizer solutions.

See Us For Application Service

JOHN Z. MARTIN

New Holland R#1 Phone 717-354-5848