

# THE AIRPLANE HELPS THE FARMER

BY HAROLD W. BALDWIN

A NEW kind of farmer's organization has got away to a flying start in these early postwar years. Its members are leaving the solid ground to which generations of their forefathers were so firmly anchored and are taking to the air. In so doing they are writing a new chapter in the history of one of man's oldest occupations. And they are pushing still further into the background the isolation that distance from town imposes upon farm life.

In a little more than half of the states — 29 is the exact number — air-minded farmers who own light airplanes and fly them on a variety of jobs in the operation of their farms, and for business and pleasure trips, have formed state flying farmers' associations. Oklahoma was the first to organize. Sixty were present when the Texas Flying Farmers' Club became a formal group. Two hundred farmers and ranchers and 86 planes turned out for the organization meetings in the two Dakotas. Nearly 200 planes were on hand when Kansas formed its state group; 375 when Nebraska organized. Ohio signed up 118 farmers as charter members. Wisconsin has a state association. So have Minnesota, Colorado,

Iowa, Montana, Illinois, Indiana and Michigan.

Now those state groups have banded together to form the National Flying Farmers Association. Early in August 1946 some 250 members representing fifteen of the state clubs flew to the Oklahoma Agricultural and Mechanical College at Stillwater for the first national convention of flying farmers ever held in the United States. For two days they compared notes on the farm work they are doing with their planes, made plans for the future activities of their national club, and inspected in all their details the new ships displayed by several manufacturers. In August 1947 they flew again to Stillwater for their second annual convention, this time a three-day program. Over 900 people from 34 states attended. The total number of planes flown in was 437.

Before he can be accepted as a member of either a state club or the national association, the farmer must meet two qualifications. He must have not less than 51 per cent of his capital invested in farming or ranching, and he — or his wife if she is the flyer — must have at least a student permit to

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HAROLD W. BALDWIN spent ten years as associate editor of the *New England Homestead*, a farm magazine published in Massachusetts. He has also worked for the U. S. Department of Agriculture and is now agricultural editor at the University of Connecticut.

fly. It all began at Oklahoma's farm and home week in August 1944. On one day set aside as "Flying Farmers' Day," one hundred farm men and women landed their planes at the Stillwater airport in response to an invitation from the College that they get together to discuss the idea of organizing. So enthusiastic were they that a couple of months later they announced the formation of the first association of its kind in this country — the Oklahoma Flying Farmers' Association.

At farm and home week in 1945 they returned for their second annual state event, 130 ships in all, owned and flown by farmers. This time they were joined by equally enthusiastic flying farmers from eight other states. And before they headed their planes back to their home hangars, the Okies and their visitors began the organization of the National Flying Farmers Association. Since then, the other states have organized and added their names to the national roster.

## II

Equipment-minded for generations, farmers began using planes and pilots provided by commercial flying services a few years after the first World War, sending them in long, low sweeps across their fields to dust their crops in the everlasting fight against destructive insects. Now it is the farmer-owned, farmer-flown plane. It made a start in a small way during the thirties, but only in the last few years have farmers realized its possibilities

as a farm machine. Since then thousands of small planes, new jobs from the factories as well as war-surplus ships, have gone to rural buyers. And many more are destined to be hangared out in the open spaces. Manufacturers estimate that from 50 to 75 per cent of their postwar production will go to customers who live in the country. Not all of them will be farmers, of course. But that they are buying-minded is indicated by reports from flying instructors in many rural areas who say that farmers form a large proportion of their students.

Those light planes are proving their worth in all sorts of ways, saving hours that can be put to good use in the fields or in the barns, because the days are never long enough on a farm. They save time and money when a breakdown in equipment may provoke a crisis during the rush of the harvest season. A cross-lots trip to town at a 90- or 100-mile-an-hour clip for repair parts is a matter of a couple of hours or less instead of half a day. And ranchers are resorting to no figure of speech when they tell you they have made a flying trip to inspect cattle roaming over hundreds of acres of range, or to find lost animals or new-born calves.

Winter storms no longer mean the isolation they once did because those farmer-owned planes bring in supplies and mail for neighbors whose roads are snowbound. They make it possible for farmers who own farms many miles apart, like Alfred Ward, Sr., of Kansas, to give them all frequent personal

attention. In his Navy basic trainer he shuttles between his Kansas wheat ranch, his cattle ranch in Texas and another cattle ranch in Colorado. From his Kansas home he can reach his Colorado ranch in about fifteen minutes of flying time, and Texas in about three hours. By road his Texas trip requires a long, tiring day of driving.

Farmers use their planes to hunt coyotes and wolves that used to find livestock on lonely ranges easy prey, to transport extra harvest hands, to spread poison bait when grasshoppers swarm like a plague over fields, to apply sprays or dusts in the fight against crop insects and diseases, and to inspect crops growing in widely separated fields.

Ranchers who check the condition of their miles of fences by plane can do it in a fraction of the time formerly required. A Kansas beekeeper flies on the hunt for fields of good honey crops in which to place his hives. And at least one county agricultural agent is giving farmers advice on the best grasses or legumes for planting on runways, a modern variant from such customary topics as feeding mixtures for livestock, or which of the newest hybrid corns will produce the heaviest yields.

The farmer is not always his own pilot. Sometimes mother or one of the older children may occupy the seat behind the wheel — as do Oklahoma's Arvid Temples, for example. Each of them — dad, mother and the three daughters — is a licensed pilot.

And R. L. Gibson of Texas has demonstrated that youth has no monopoly on the farmers who fly. Seventy-seven years old, he learned the trick when he was seventy-three, and he celebrated his seventy-fifth birthday by buying a plane!

Gene McGill, whose idea it was that a national association be formed and who was its first president, uses his plane to manage his Oklahoma wheat ranch and to follow his harvest crews as the combines work northward.

### III

What does it cost the farmer for his latest time-saving equipment? No more than he would pay for some of his heavy farm machinery. The \$2000 at which prices for a two-place light plane begin is about what he would pay for some models of tractors, or for a field chopper for putting up hay or silage. If he prefers a fancier four- or five-place ship, its \$5000 or \$6000 price tag would also be found on a large wheat combine or other heavy harvesting equipment.

But while the farmer-owned, farmer-flown plane is making its debut to the grand accompaniment of state flying clubs, its commercial predecessors have become agriculture's aerial hired men for field and orchard work. Farming from the air was first made possible in 1922 when the U. S. Department of Agriculture developed a practical method of plane-dusting cotton to protect it from the boll weevil. Today there are some

eighty or more commercial flying services that provide light planes, with pilots, to do specialized agricultural work. Flying so low they sometimes just about clear the crop over which they are working, they dust or spray the farmer's field crops, spray his orchards to keep the apples on the trees, plant some of his seeds and fertilize his fields at planting time.

Dusting for the control of crop pests is still the plane's most common farm job. Spraying from the air is of more recent origin but it, too, will increase as improvements in equipment and methods are developed. Cotton growers are extensive users of the aerial dusting method. So are vegetable growers in California, in the Lower Rio Grande Valley of Texas, in Florida and along the eastern seaboard, and citrus fruit producers in Florida, Texas and California.

California's rice growers took to the air to get away from a serious weed situation. Under the old system of planting, the fields were flooded to promote seed germination, then drained. But barnyard grasses came in to such an extent that hand weeding costs became prohibitive. Water acts as a weed control, and experiments showed that rice would grow well even if the fields were covered with as much as six inches of water. Then the growers discovered that it was an unpleasant task to plant their flooded fields with ground equipment. At that point they decided to call in the flying services.

Flying at a height of 15 to 25 feet, and lower if the wind is blowing, one plane can plant from 350 to 400 acres per day. In sharp contrast, the usual ground method can seed only about 75 acres in the same time. Seeding is a simple mechanical process, done automatically by means of a spreader attached to the bottom of the seed hopper. The pilot opens the hopper, the seed falls on the spreader and then to the ground.

But in 1946 California's rice growers tackled the weeds themselves from the air. By plane they applied the new weed killer, 2, 4-D, to 3500 acres of the growing crop in the Sacramento Valley with such success that it is likely to become standard practice.

In recent years commercial orchardists have added a new twist to their spraying program. As apples ripen, they have a tendency to drop from the trees before they are fully ripe. The longer the grower delays harvesting so that his fruit will attain proper color and maturity, the greater becomes the danger that he will not have a full crop to pick. Much of it may be on the ground, to be sold at lower prices.

Then it was discovered that chemical compounds commonly known as "plant hormones" would retard that dropping tendency if applied as a spray when the fruit first begins to fall. So powerful are they that a ridiculously small amount — about half a teaspoonful in 100 gallons of water — will do the trick.

When Pacific northwest fruit grow-

ers apply the spray, props hold up limbs that are heavy with fruit and the orchard is littered with boxes in preparation for picking. Ground equipment finds it difficult going under those conditions, but the obstacles mean nothing to a plane flying four or five feet above the trees. Traveling at a speed of about 90 miles per hour, each plane carries from 60 to 80 gallons of spray that is dispersed through rotors resembling steel buffer brushes. Small propellers mounted on the leading edge of the wings whirl the rotors at approximately 2500 revolutions per minute. In one hour a plane can spray from 25 to 30 acres.

#### IV

Southern Idaho potato growers may use the commercial planes for a new farm practice. Unless a killing frost ends vine growth before the first of October, the tubers lack sufficient time to mature before the digging. Then the crop must be dug in a shorter period, thus knocking harvest labor plans askew. Growers may also miss the early markets so that storage becomes necessary until prices improve.

What to do about it was one of the problems studied by horticulturists at the Idaho Agricultural Experiment Station in Moscow. They discovered that covering the vines with a chemical dust is one method of killing them when nature is late with her own lethal breath. And because a plane can "freeze" a large acreage in a short time, it is ideal for the job.

Flying at speeds of from 80 to 120 miles an hour the plane barely skims the tops of the vines, the landing wheels frequently touching the taller ones. One plane can dust from 300 to 400 acres per day, depending upon the size of the potato fields and their distance from the landing fields where the ships refuel and replenish their supply of dust. Experimentally, dust has been applied at the rate of ten acres in six minutes, a feat far beyond the ability of ground equipment to equal. Its practical possibilities are indicated by the Station's estimate that in years when a natural frost is late, 30,000 to 40,000 acres of Idaho's potatoes may be artificially frozen by the planes.

Other Idaho farmers have developed a fast-growing enthusiasm for the planes, prompted by their almost sensational results in the 1946 control of some of their most serious crop pests. They used the commercial services to dust their peas for the control of weevils and aphids, their onions for thrips, turnips and rutabagas for aphids, hay and seed alfalfa for weevils and legume bugs, corn for earworms, and potatoes for the control of the Colorado potato beetle and flea beetles. At least 90 per cent of all the dusting in Idaho's southern irrigated sections in 1946 was done from the air. So popular was the method that one seed company which estimated its growers would want about 700 acres of peas dusted by plane had to up the figure to 2000 acres. Before the year was much more than half

over, both farmers and seed companies were contracting with the flying services for their 1947 operations.

Farmers in a southern Arkansas county found another job for the light plane not so long ago when soaking rains kept their fields too wet for ground equipment to operate. They used it to plant lespedeza, an annual legume grown for hay and pasture, and to fertilize both lespedeza and oats. The plane did both jobs with a tremendous saving in time. It planted at the rate of approximately 60 acres an hour whereas the usual method seeds an average of only four acres per hour. And it broadcast fertilizer at the

rate of 30 acres per hour, compared with the four or five covered with ground equipment in an hour of time. On a still day the planes fly about 25 feet above the ground, and only 15 feet when the wind is blowing. One plane can carry 600 pounds of seed or 800 to 1000 pounds of fertilizer.

It is a far, far cry from the primitive type of agriculture still existing in some parts of the world, to the highly mechanized farm of the American farmer. His keen interest in equipment that will save time and labor is traditional. He has tried the light plane and found it good. Now he is giving it more jobs to do.

## PHRASE ORIGINS—25

**NAMBY-PAMBY:** *The recommendations issued not long ago by the President's Committee on Civil Rights have been referred to as "no namby-pamby affair." It would have been unfortunate if the document had been called namby-pamby, for the phrase has always meant foolish, weak and insipid. It originated in an incident involving a forgotten English poet named Ambrose Phillips (1671-1749). Phillips wrote some verses for the children of Lord Carteret, which were ridiculed by the critics after they were made public. One of the critics described them as "namby-pamby," a phrase he invented from the children's way of pronouncing Ambrose and rhyming it. In 1726 Harry Carey wrote: "So the Nurses get by Heart Namby Pamby's Little Rhimes"; and Alexander Pope clearly showed the identity of Namby Pamby when he wrote in the Dunciad (1733): "Beneath his reign shall . . . Namby Pamby (A—e P—s) be prefer'd for Wit."*

MORRIS ROSENBLUM