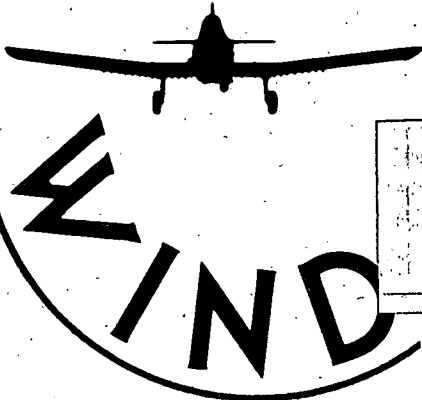


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Nature of money is changing

By Patricia J. Estes

The economics of the 80s will demand more careful planning and business management. That was the theme of a panel presentation on that topic at the January North Dakota Aviation Association annual meeting.

Bob Worcester, Ninth Federal Reserve Bank, one of the panelists, opened by presenting some background on the role of the Federal Reserve.

The Federal Reserve office on the regional level acts as a central bank. On the national level it sets monetary policy.

Every country in the world, he said, has a similar system. The Federal Reserve goal is to make sure there is adequate finances available for the economy.

It is a difficult task, a demanding one, he said, where decisions have to be made without there ever being sufficient information. Mistakes are made since it is a fallible system, said Worcester.

There have been major changes in the finance industry recently, he said. Non banks, such as savings and loans, are now more like banks.

The technology advances have impacted the entire industry. Different kind of accounts, credit cards and automatic payment plans, as an example, have resulted.

Measuring the amount of money supply is the task of the Federal Reserve, Worcester continued. The rapid changes in the industry recently have made available measuring methods less effective.

The very nature of money itself is changing. For example corporations are setting up remote accounts in banks in Wyoming for instance to increase the daily float.

When interest rates are high, he said, the use of money is costly. People try to find ways to beat and to use the system to their advantage.

The Federal Reserve aims to create money at a rate not too fast for inflation or too slow to constrain the economy.

The Reserve is set up structurally to be reasonably free of Congressional, federal and political pressure. However, it is not totally free. It does not operate in a vacuum.

Fiscal policy, he said, has to do with the budgetary process of the federal government. Fiscal policy is related to revenues and expenditures of the federal government. Fiscal policy affects monetary policy.

In theory the U.S. government could go to the private sector for financing but

this would not add to the overall money supply.

Instead through issuance of treasury bills, for instance, new money is created. The money market becomes unstable. The Reserve then moves in to stabilize the situation but this leads to decreased money supply and higher interest rates.

There is a growing acceptance, Worcester said, that a little bit of inflation is all right. This makes the control and slowdown harder to accomplish.

A major shift was made in Federal Reserve policy two years ago, he said. A decision was made to concentrate on the quantity of money supply and pay less attention to interest rates.

While higher interest rates indicate a tighter supply of money, this fact does not indicate the exact detailed available money supply.

Research revealed that the money sup-

ply was growing faster than interest rates were indicating, he said.

Thus it was decided to restrain expansion of the money supply rather than monitor interest rates. This was not a complete 360 degree turn, he said, but did represent a 180 degree turn.

The higher interest rates and this change in policy by the Federal Reserve caused pain, great pain for some companies and people, he continued.

Companies and people could afford to borrow money at 10 percent and if prices went up 12 to 14 percent, the result was in reality a negative interest rate. In addition the interest could be deducted from taxes.

The monetary policy makers discovered this was what in fact was going on. Decisions were being made to buy a product at today's price rather than pay a higher price later on. Borrow to buy to save paying more later.

The result was inflation.

A very serious effort is underway, he said, to bring inflation down. All of this is extremely painful.

It is not just an inconvenience, said Worcester. It fractures some businesses but that pain is necessary to get the job done.

By not dealing with inflation earlier and by not sticking with policies that could have helped, the public didn't really confront the situation. There remains a credibility problem where the public still does not want to believe or accept what must happen to control inflation.

The escalation of inflation started in the mid 60s, he said, in the Viet Nam era. It created a nation of people who believe, have a mind set, that inflation is a reality of life and not a problem to be resolved.

Some people prosper in inflationary times, he said, but more are hurt and suffer. We need to, we must deal with inflation and stop it, said Worcester, and that is painful.

There are many other related factors such as energy in this inflation picture. It is a complex scenario, he said.

It is possible to deal with it without boosting unemployment but we lack the mechanism to do so in this country. Thus the suffering will be greater, he said.

Certain industries hurt more in economic times like these. That is why renegotiation of labor contracts for lower wages and benefits is happening. It is difficult but it is the kind of thing some industries must do.

In concluding, he said, "We need to stay with it, hang tough and get the job done."

Foreign pilots

may gain U.S.

certificates

(FAA Report)

Individuals holding pilot certificates issued by foreign governments (ICAO Members) may obtain a U.S. pilot certificate based on their foreign certificate. In the past, this certification was often accomplished through the mail. Due to a recent change in national policy, it will no longer be possible to issue pilot certificates by mail.

If, in your dealings with Canadian pilots (or other foreign pilots), this subject should come up, you can respond that from now until further notice, all applications for U.S. certification must be made in person by the individual making application. He should have in his possession a current and valid pilot license and medical certificate.

Energy development boosts N.D. aviation

By Patricia J. Estes

Harold Vavra, N.D. Commissioner of Aeronautics, said that the history of the country's economy shows that this inflation-recession trend should begin a turn around this coming May.

Vavra said that as one of three panelists discussing the economics of this decade during the January annual North Dakota Aviation Association convention in Dickinson.

Looking at the aviation industry in this state, he said, while boardings are down in the east and central portions of the state, they are up where energy development is underway.

A substantial increase in aircraft registrations for this year is recorded with the increase coming from the six county energy development area.

The only county in the eastern portion of the state with significant increase was Dickey. This may reflect, he said, the new airport at Oakes. The rest of the counties were either down in numbers or flat.

This past year all records for aerial spraying were exceeded in North Dakota, according to Vavra.

Nationally, he said, he believes the present administration is on the right track even though it is a painful experience for some.

Vavra noted that in 1948 a 4 door Chevrolet Sedan could be sold and

delivered to Minneapolis with a sticker price of \$750. In that price was a net profit of \$75 for each unit for the manufacturer.

As inflation came along, General Motors went along. If price goes up, the share of profit would increase so let's not fight it, seemed to be the attitude, he said.

Today car manufacturers are looking at a decrease in profit margin and in sales volume.

Vavra said he used that example to show that all of us have contributed to the problem.

In Japan, supply side economics have been used for 20 years and this country is just now starting.

The overall effort is one that must encourage savings, investment and productivity while discouraging consumption and encouraging exports, he said.

The inflation rate in Japan is below five percent annually. The average Japanese employee saves 18 percent of his income. There is a good money supply in the country. This ample money supply provides needed money for government and private business.

An increase in savings in the United States, Vavra suggested, would help control and reduce inflation. Our savings in recent years have been four to five percent, tops six percent, of personal income. This is the lowest rate in

Continued on page 2

It was not a good year

The accident box

Accidents in NORTH DAKOTA
(FAA Report)

	January 1982	1981
Accidents	0	0
Fatal Accidents	0	0
Fatalities	0	0

By Patricia J. Estes

The safely record for 1981 aviation in North Dakota was not a good one, Mike Bierenger, FSDO, Fargo told those attending the North Dakota Aviation Association convention this winter.

That poor record reflects on the industry as a whole, he said, and we are all responsible for the industry.

Years like 1981 guarantee adverse media coverage and negative reaction in the public eye.

Adverse media coverage guaranteed

There were 24 aviation accidents resulting in major structural damage to the plane and injury to those on board.

Six accidents resulted in 15 fatalities. There were four aerial spraying accidents with one fatality.

Of the fatal accidents, 14 of the 15 were in the good weather months of May and June and five fatalities occurred then.

In fact sixteen of the 24 accidents happened from May through September. This period is also the season of peak flying hours with more pleasure flying done then.

Bierenger reviewed the accidents and causes. One was a mid air collision between two training aircraft. One person died as a result. One was flying in a pattern as directed by the tower, flying a leg of that pattern. One was in a touch and go situation and the two in-

tersected.

He said this accident pointed out that pilots must always assume visibility responsibility, that of seeing and being seen. Flying legs should be avoided over the runway as well.

One helicopter accident, in which there was an engine failure, resulted in eight fatalities.

Helicopter accident claims eight lives

One landing accident resulted in three fatalities. The pilot attempted landing on a road. Then he tried to go around in poor terrain for take off and hit a ditch.

Another fatality happened during an aerial acrobatic exercise.

The one agricultural related fatality did not involve a certified aerial spray pilot he said. This pilot doing some spraying for himself had the plane stall, impact and then catch on fire.

One young pilot was buzzing at low altitude when a crash took his life.

Non fatal accidents were also discussed. Two recent incidents on IFR flights showed weather conditions interfered with the flights.

Others under VFR included one where freezing rain was encountered soon after departure. Icing built up and a return was attempted but the plane hit tower lines.

Another involved engine problems in a 100 percent humidity situation. The pilot needed more familiarity with the action of an engine in this situation.

Several were related to insufficient fuel. Pilots either did not check the fuel level and supply or were not sufficiently familiar with the aircraft and fuel

Insufficient fuel at fault

Accident report

(FSDO comments)

No aircraft accidents or incidents were reported to have occurred in North Dakota during January. I hope this was due to the successful safety efforts of our area pilots and not just because of the extreme cold and snowy weather. We all share the responsibility to insure that 1982 is a prosperous accident-free year.

The safety tally for 1981 in North Dakota shows a total of 24 accidents and 14 incidents occurring which resulted in aircraft damage and/or injury. Six fatal accidents occurred resulting in fifteen fatalities. A mid-air collision, a low-level acrobatic demonstration, an ag "stall out of the turnaround", and a buzz job resulted in one fatality each (Total - 4). Eight died in a helicopter engine failure accident.

Three lost their lives in the post-impact fire from an attempted go-around after the pilot lost directional control on landing. Five of these fatal accidents occurred in May and June.

Three accidents resulted from fuel starvation/exhaustion. An airplane will not continue to fly if you fail to feed it a steady diet of fuel. Another three were weather related — one from attempted VFR in freezing rain, and two from the loss of visual cues during an instrument circling approach. One mechanical malfunction resulted in fire when the starter remained energized during flight. One aircraft suffered a bad case of carburetor ice. Three pilots lost directional control during the landing rollout. And another pilot failed to maintain airspeed on final approach.

system.

One mechanical problem which overloaded an electrical system ended in an accident which included both the plane flipping and a fire.

There was one training accident. The instructor had set up a forced landing situation but the terrain selected wasn't adaptable for this exercise. There was

One training accident

not enough time for proper instructor intervention due to the terrain.

Agricultural accidents of a non fatal nature included a forced landing with a cracked cylinder. The plane stalled and flipped. In another accident the plane hit a wire and the pilot was injured.

Safety, Bieringer said, is the responsibility of the entire N.D. aviation industry.

The industry must set proper example and each pilot is responsible to do this in his own flying.

"Safety is the responsibility of the entire N.D. industry"

We must ask, he said, what action do we take when we see a pilot commit an unsafe action. Do we point this out or ignore it? If we see an unsafe environment for flying do we point out the potential problems?

Are we keeping up our own retraining and continuing our education in aviation? He said, as professionals we must promote recurrent training.

Deregulation meeting topic

Airline deregulation proponents promised better service to the consumer as well as fare and service competition when the legislation was passed by Congress in 1978. Since then, the industry has been under scrutiny, watching for the results of the deregulation efforts.

A nonprofit, nonpartisan research organization, the Upper Midwest Council, based in Minneapolis, has been studying the deregulation of the airline industry since 1978. It published a study on deregulation's impact on the Upper Midwest in 1979. Since 1981, it has been doing a follow up study on deregulation. As part of the project, the Council has set up a conference to address the question, "Airline Deregulation: Can It Keep the Promise?"

This conference, scheduled for May 6 at the St. Paul Radisson Hotel, will feature speakers from the Civil Aeronautics Board, state aeronautics officials, airport officials and others involved in the airline industry. The keynote address will be delivered by Gloria Schaffer, a CAB member since 1978.

State aeronautics officials from South Dakota, Montana, Nebraska and Wisconsin will be speaking about the changes in air transportation in their

respective states. An overview of the deregulation legislation will also be provided.

Sponsors for the conference include the Greater North Dakota Association. Ad-

ditional information, and a registration form for the conference, can be requested from the Upper Midwest Council, 250 Marquette Avenue, Minneapolis, Minn. 55480. The conference registration fee is \$30.

Increase savings . . .

From page 1
the free world.

In 1981, Japan experienced a 40 percent positive growth in gross national product while this country experienced a negative growth for the same period.

The U.S. public is operating under a psychology that says borrow to buy before the price goes up and then pay back the loan with dollars of reduced value, said Vavra.

Noting the cost of government, Vavra said it costs \$100 billion for the taxpayers to enforce various government regulations. The public pays through taxes and as a consumer of higher priced goods due to the cost of business meeting those government regulations.

Less available funds for such regulation activity will result in less bureaucracy, he said.

In this entire economic situation, Vavra said, the media is part of the problem. The economy is analyzed in headlines and on radio and television not by experts in the field but by reporters doing a very inadequate job of reporting and interpretation.

One area that must be looked at in this is the attractiveness of short term opportunities versus long term investments.

America's economy needs long term investments but in this current situation, returns on short term opportunities offer a higher faster return than can be gained by long term investment in the economy.

While time will tell, Vavra voiced the view that if politicians don't get weak-kneed, we may end this inflation problem.

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April 1982

Report by NAAA State Director

Meeting is memorable

By Dan Thompson, Director

Meetings come and meetings go as did the spring board meeting of NAAA which was held March 10-12 in Washington, D.C. However, this is probably one such meeting, as a director from North Dakota that I won't soon forget.

As a new director attending his first board meeting, one would usually be thought of as all ears and no voice, not so.

I was the follow up of a state resolution sent ahead to every state director in the nation, stating that North Dakota wanted some action on specific items that concerned North Dakota. (Resolutions that I had no direct input in forming and very little history as to their origin.)

I did not know exactly how I was going to present North Dakota's true views nor did I know how I would be accepted on a national level. I did as much research into the background of the resolutions as I felt I could prior to departing for D.C.; talking with people in NDAA; hearing the pros & cons of the resolutions.

Task is to ask and answer questions

As a newly appointed director, I had the task of answering and asking many questions that would surface. With this position I arrived in D.C. a day early to allow time to research some of these areas in question prior to the start of the actual meeting.

After arriving in D.C. I went to NAAA offices and met with Roy Wood, the current NDAA President. We exchanged NDAA and NAAA views for some time and attempted to outline a method as to exactly how to bring the subject up before the whole board.

Harold Collins and Farrell Higbee, NAAA staff members, were also there along with other current officers. I had met with Farrell Higbee during the Minnesota convention the week before.

As directors started arriving in D.C., I made an effort to meet as many as I could prior to our meeting and I felt they were all very open-minded to the NDAA and NAAA controversy and getting it solved.

On Wednesday morning, the 10th, I was asked to attend the finance and budget meeting and did so. At this meeting Mike Clark, treasurer, said he had been personally contacted by several individuals and asked if the NAAA could possibly put the financial statement in a more simple form. That sounded familiar to me. Also I had the opportunity to review any and all expenses incurred and checks written.

Running NAAA is tough job

With today's economics, financing and budgeting, operating NAAA can be and is as tough a job as any business of its size, but I honestly believe it is being done in a manner which should be acceptable to everyone concerned.

On March 10th, President Wood got up before the full board and offered some opening remarks. In doing so he made two concerning NDAA and what he thought NAAA viewed reactions would be. He said the NAAA viewed NDAA letter of resolution as a direct request to drop out of NAAA and it was in his opinion at that time that NDAA dues would be sent back.

In part two of his statement President Wood also stated he had a telegram from a group which had

formed in North Dakota calling themselves The North Dakota Agricultural Aviation Assn. and that they requested to join NAAA. Needless to say this got the attention of all the members and especially me as I hadn't had an opportunity to make any statement as yet and now had to address questions surrounding the other group from North Dakota. Back to my room to do some rewriting.

The remainder of that day and the next morning were spent in committee meetings of which I was a member. That included awards and also the legislative committees.

Committee reports heard

Prior to the first full business session, we heard reports from committees and out of them came the following comments. Out of Constitution and Bylaws came a resolution to limit voting powers to five immediate past presidents and no more. There was much discussion, but it is going to a vote. A 15 day waiting period is necessary for a constitution bylaw change.

Also it was suggested that the nominating committee consist of an equal number of members at large as past presidents, etc. Also the committee was to choose two candidates for each position and these are to be voted on by secret ballot.

Out of other committees came suggestions for improvement of WAA magazine and possibly having an outside firm handle the publishing of it.

There were many other reports and the majority of them were very positive and encouraging for the future of NDAA. What was encouraging to me and should be to our state organization is that several of these suggestions were identical to those NDAA was concerned with. They came out of committees prior to my statement.

My turn on the floor

Finally it was my turn to take the floor and make a statement concerning the resolution that was set forth in a letter. The actual statements made and discussions that followed in the next two days were lengthy and at times heated, I'll try to summarize the discussion, hopefully in a manner everyone can understand.

I started off by stating NDAA felt a strong need for NAAA at present and would continue to do so in the future. I felt I had already been given answers for many grey areas of concern and I was confident I could assure NDAA with information I had received.

I went on to say that I admitted the resolution was written poorly and that several feelings had slipped in and allowed a slanted view on some items in the resolution, but that the intent of this resolution was to get NAAA attention on some important issues.

Pleased with committee action

I went on to say that if I were to rewrite it today, March 12, I would eliminate items 2,3,4 & 5 of the resolution and retain 1,6 & 7. I would also make it very clear that NDAA does not want to drop out of NAAA and that would only be a very last resort, if nothing was accomplished. Or if I felt I was unable to communicate with individuals in NAAA. Also I reminded the directors that these main items had been brought out of the committee already and that I felt that progress was being made in certain areas and that I personally had no more such areas of concern.

After my statement there were several questions as to what were the circumstances which led up to the resolutions, who wrote them, etc. I did my best to explain, but there were still those who felt NDAA should be dropped and the new group picked up.

The issue went back and forth through the final business session with the result being that we (NDAA) remain as part of NAAA.

President Wood stated that he felt I had been open-minded about the whole issue and also that he felt much progress had been made. I felt the same and without the complete honesty of everyone, there could have been very little accomplished.

Great concern on the national level

There was still great concern on the national level on whether more old personal fires would be rekindled. I assured NAAA that as long as I represented NDAA there would be none and that I would try to get to the bottom of any issues as soon as they might arise. I also stated that I felt communications were the key to most problems present and future.

In order for there to be controversy there has to be two opposing sides to an issue and I would only be kidding to say there were no opposing sides to this one.

But all had support or I could never have gotten a chance to explain the NDAA position in conjunction with NAAA and furthermore nothing would have been accomplished.

There may be questions

I'm sure there are many questions after reading the above article and as to exactly how things were stated. I will have a complete transcript of the meetings which took place and possibly in future NDAA sessions we can discuss them further.

As a state association I'm sure we would never get into a position where we could close the doors to an individual member wanting to air his feelings on a subject. But, also I believe that as officers in the state association and director on a national level, we must be very discreet in what is relayed on past the state level. We also should be a constant reminder to those individuals that it is very difficult to satisfy individual concerns on a state level, let alone on a national level.

I further hope that I accomplished what I was sent out to do, both on a NDAA level and also on the level of NAAA.

I feel very strongly that my position was two-sided and had to be. I never had any intentions that there would be one single winner in this play on words using resolutions, accusations, rumors, etc.

Time for business as usual

My only hope is that things could be resolved and business go on as usual with a little give and take from all parties concerned.

It has also brought to surface another very strong concern for North Dakota Ag. Pilots and that is need for us within our state to address those needs and grow in numbers which benefit all. I believe that also stands a very good chance of being accomplished.

Aviation business briefs . . .

New helicopter service

Ben Meier of Jamestown and Beulah announced a new helicopter service based at Beulah Airport, Beulah, N.D. The firm is known as Dakota-Helicopter Air Services, Inc., which operates Sikorsky Model S55 Helicopters which are equipped for air ambulance and are capable of handling three to four patients along with two qualified medical personnel over a distance of 200 miles. The Sikorsky's are set up to provide emergency medical care with a full range of life saving equipment, according to Meier.

According to Meier, Dakota-Helicopter at Beulah can be airborne within five minutes of receiving a call.

The Dakota-Helicopter Air Service can be used to transfer patients between hospital facilities, or to pick up a patient at the scene of an accident or illness.

Several public and private agencies are responsible for calling Dakota-Helicopter including all enforcement agencies, fire departments, ambulance services, hospitals, physicians, industrial safety representatives and other designated authorities, Meier said.

The Sikorsky helicopter is based at the Beulah, N.D. airport and stored in an all-weather hangar.

A fully equipped communications center is located at Dakota-Helicopter at Beulah and is manned 24 hours a day and will keep constant communication with the helicopter crew. During a flight, the flight nurse can communicate by radio with the physician in emergency service. Telephone patch capability allows the receiving physician to telephone the Communications Center and speak directly to the nurse in the helicopter. This system allows the flight nurse to request additional medical services to be ready for the patient upon arrival at the hospital.

PERSONNEL

Overall management of Dakota-Helicopter at Beulah is under the direction of the Chief of Emergency Services. Staff members include pilots, communications specialists and highly trained flight nurses, Meier said.

EQUIPMENT

Inside the helicopter a full range of life saving equipment is available including cardiac monitoring and defibrillation devices, oxygen, suction intubation, and ventilating equipment, emergency medicines, intravenous fluids, splints and other supplies. Additional specialized equipment is available for obstetrical, pediatric, newborn and burn patients.

Dakota-Helicopter will be capable of handling all emergencies 24 hours a day. In addition to the on-duty physician, specialized medical staff members are on call and are available in less than 20 minutes. Complementing emergency service are intensive care, coronary and progressive coronary care, pediatric intensive care units.

Nurses are trained to provide care at the scene of accidents, through critical care areas, they maintain their expertise to care for intensive care patients.

Large loading doors on the Sikorsky S55 and interior assures easy access and maximum patient comfort, Meier said. Further information may be had by calling Dakota-Helicopter at (701) 873-4100.

Big Sky appoints

BILLINGS, Montana—Terry D. Marshall, President and Chief Executive Officer of Big Sky Airlines, has announced the appointment of Robert L. Hayes to serve as Sr. Vice President and Chief Operating Officer. Hayes comes to Big Sky from Republic Airlines following a successful career that began as a ticket agent for Bonanza Airlines in 1957. After a brief period, Hayes was promoted to assume successive responsible management positions in station operations, cargo, sales and marketing, and public affairs. Most recently, Hayes was responsible for the direction and administration of the Community Affairs department, after the acquisition of Hughes Airwest by Republic Airlines.

As Sr. Vice President and Chief Operating Officer, Mr. Hayes' primary function will be overall direction of Big Sky's day-to-day operations, reporting to the President. Current department directors of Flight Operations, Maintenance, Sales & Service, and Facilities, Charter & Cargo will report directly to Hayes.

Of the appointment, Marshall stated, "His experience, integrity and seasoned judgment will be tremendous assets to Big Sky. We at Big Sky are extremely pleased to acquire an individual with Bob's qualifications."

Hayes and his wife, Lila, will be moving to the Billings area from Scottsdale, Arizona in the near future. Currently they have a daughter, Brenda, who is a senior in high school and a son, Bryan, who is a sophomore at Scottsdale Community College.

Too much gloom and doom

"Financial institutions and ag lenders must help us improve the 'gloom and doom' attitude toward agriculture in North Dakota," contends Agriculture Commissioner Kent Jones in launching an effort to help farmers get a "better shake at the bank." Jones says that he knows he can't turn the high interest rates around on a state or local level, but there are certain conditions and attitudes that can be addressed as they pertain to farmers who are good managers suffering from two years of circumstances over which they have no control—drought and global politics.

"Banks' investment in agriculture has been steadily declining, according to recent statistics," cites Jones as one of the local and statewide conditions which need to be addressed. Another, which he refers to as a "we're-all-in-this-boat-together" concern, is keeping farm land in production rather than flooding a market with land, which would then create a damaging domino effect for banks and other lenders by depressing the price of farm land.

"Entirely too many 'gloom and doom' predictions are making the headlines and thus disproportionately influencing the public attitude toward some of these farmers making it through spring planting. FmHA, Land Bank, and other ag lenders have tried to set the record straight—emphasizing that they will stand by their good borrowers. However, prophecies of doom, said often enough, can become self-fulfilling," says Jones about his reasons for wanting to confer with the whole financial sector.

The Ag Commissioner goes on to say, in his position paper to the finance and banking institutions, that "Economic projections from Washington and Wall Street are improving. The ag community, if shown some confidence by the financial community, will get out and plant this year's crucial spring crop. It is crucial, both literally and figuratively, in this time of transition in economic thought. Farmers need to show confidence in their own ability to adapt to world market demands. Symbolically, they need to be able to plant seeds of optimism for the rest of the nation to see as a positive indication that our number one industry has faith in this nation's future."

Executive Aviation expands

On March 1, 1982, Executive Aviation, Inc. of Fargo, North Dakota opened a new hangar and front line fuel service at Hector Airport. The new facility has Phillips aviation products, including Philjet and 100LL fuel and oil products.

The building facilities will include a 6,000 square foot heated hangar for aircraft storage, a passenger lounge, flight planning room with direct lines to the Flight Service Station and National Weather Bureau, pilot lounge with easy chairs and color TV, free coffee and ice, and some of the best service to be offered in the area.

"This new facility will enable Executive Aviation to better service the needs of our aviation customers," said Peter B. Hall, President of Executive Aviation, Inc. "Our fuel contracts with both Phillips and Mobil Oil Companies allow us to provide the fullest range of aviation fuel products, from 80/87 octane to 100/130 octane low lead and 100/130 octane leaded Avgas; and the best of the jet fuels with Phillips Philjet."

Catalog available

GRASS VALLEY, CA., March 1, 1982—Radio Systems Technology, Inc., pioneer designer and marketer of low-cost, high technology, light aircraft avionics and test equipment kits, announces the availability of its Spring 1982 Catalog.

The 16 page, illustrated catalog contains over 20 different build-it-yourself kits including: several different audio panels, 2 and 4 station aircraft intercoms, marker beacon receivers, a 6 channel communications transceiver, unicom stations, and more. Headsets, radio antennas, and several of their kits may also be purchased fully assembled. Various miscellaneous equipment and supplies of interest to general aviation aircraft owners and pilots are also featured in the new catalog.

Copies of the catalog may be obtained free by writing Radio Systems Technology, Inc., Airport Industrial Park, Grass Valley, CA 95945-RR5. Or (outside California) call toll free 800-824-5978. The firm's service number is 916-272-2203.

Ag in economy

In North Dakota, a farm state, agricultural production ranks first among various sectors contributing to this state's economic activity, according to Norbert Dorow, extension economist at North Dakota State University. Of the 106 million in the U.S. labor force, including over 7 million unemployed, less than 4 million work on

the nation's 2.3 million farms. Slightly under 3 percent of the nation's \$2.7 trillion gross national product, or about \$75 billion, can be credited to on-farm production. Although gross farm sales were about \$136 billion in 1980, farmers utilized inputs such as fuel, fertilizer, chemicals and machinery provided by other sectors of the economy. Farmers also purchased feed, seed and livestock from within the farm sector.

North Dakota's gross state product in 1980 was estimated at \$7.1 billion. Agriculture's share was \$1.1 billion. Gross farm sales were \$2.3 billion; however, farmers purchased farm inputs from outside and from within agriculture. This state's gross state product accounts for about one-fourth of one percent of the nation's gross national product. North Dakota's farms account for about 1.6 percent of the nation's farm output. In North Dakota, the average of 52,000 farm workers in 1980 accounted for about 17 percent of total workers in the state.

IRA's best deal in town

Tax-sheltered individual Retirement Accounts (I.R.A.'s) are "the best investments in town," according to University of Minnesota extension economist John Helmerger. Beginning this month, nearly every worker is eligible to put aside up to 100 percent of earnings or a maximum of \$2,000 toward retirement each year. Both the investment and the interest it earns are tax-free until the money is withdrawn upon retirement.

Helmerger adds that married couples are allowed even greater contributions, up to \$2,250 where only one spouse is employed or \$4,000 when both partners work, provided each earns \$2,000 or more from work. In addition to the tax advantages that I.R.A. contributions offer, their interest rates are not regulated so financial institutions are expected to compete for I.R.A. dollars with attractive rates.

I.R.A. savings can be a windfall when a person retires, according to Lorraine Ruedy of the First Bank System, St. Paul. For example, a 30-year-old who contributes \$2,000 each year to an account paying 12 percent interest will have \$700,000 accumulated by the time he or she is 60. Persons may begin drawing out their I.R.A. money without penalty at age 59½. The money is taxable once the person begins drawing it out, but upon reaching retirement age, most persons' incomes and their tax brackets have gone down so the tax is less burdensome.

Helmerger thinks I.R.A. investing is wise. "Anyone who can take advantage of an I.R.A. and doesn't is making a serious mistake," he says. "Social security benefits for members of the post-World War II baby boom won't be nearly as adequate as they are for retired persons today. Saving \$2,000 a year is little enough to insure some measure of security during retirement."

He advised consumers to shop around for the most favorable rates and terms for I.R.A. investments. Banks, savings and loans, brokerages and insurance companies are all vying for I.R.A. dollars and terms will vary widely. A potential I.R.A. investor should consider not only interest rates but the degree of security an institution offers. Banks and savings and loans insure their I.R.A. accounts up to \$100,000 with the agencies of the federal government. Brokerages and mutual fund companies may be able to offer higher interest rates but without federal guarantees.

Ag sprayers need to be aware of P.R.

By Patricia J. Estes

A look at public relations and the aerial spraying industry in North Dakota was provided in some of the remarks made by Mike Bierenger, FSDO, Fargo during the North Dakota Aviation Association annual 1982 convention this winter.

Bierenger opened by noting that the industry is changing and North Dakota aerial spray pilots must change with it.

Public tolerance is low in this consumer interest era, he noted. If spray pilots get too close to property or people, the FSDO offices gets complaints.

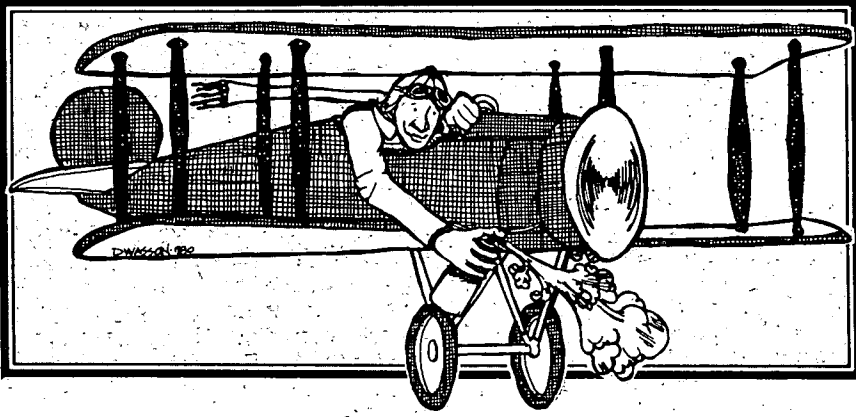
Areas which were wide open fields a few years ago now have new housing and business developments. When spraying in congested areas, be very aware of this.

PART 137 allows flight to within 500 feet of people and property when necessary, and he stressed, if not creating a hazard.

When ferrying, that 500 foot distance must be maintained. During spraying operations be very aware of the regulation requirements on distance allowances to people and property.

During 1981 spray season there were complaints that flights near houses and autos created hazards.

Remember, Bierenger said, a driver in an automobile may feel unsafe even though the pilot doesn't see where a



hazard is being created.

If spraying in the vicinity of an interstate highway, the traffic increases the chance of creating a hazard.

A hazard, Bierenger said, is not only in the eye of the pilot but in that of the public. A court may agree a hazard was created.

With housing and business developments in areas which used to be all cropland, it may be that crops and fields in that area can no longer be aerial sprayed due to congestion. A turn around over congested areas is never authorized, he said.

On the topic of drift, he said, just the smell of a chemical can trigger a complaint, even if invalid. Complaints claim a pilot's time and energy. It is good business to try and avoid these situations.

Discussing aerial spraying safety, Bierenger said the turn around is the most hazardous operation in aviation. The tight parameter leaves little room for error.

Accidents when an aircraft not intended for spraying is used in such an operation are definitely more catastrophic. Agricultural aircraft are designed to survive crashes.

Use safety equipment including helmet, safety belt, shoulder harness. Check if chemical and sun have weakened material in the safety belt. The best available restraint system is needed if a crash happens, he said.

Be aware of the human factor, Bierenger said. Fatigue plays a primary role in accidents. In a year like 1981 when state ag pilots logged a record number of hours, fatigue and pressure are real dangers. Be wary, he

advised.

Finally, he said, if a chemical spill happens, investigators are more concerned with the clean up procedures.

Of great concern is load dumping. While a pilot may be forced to do this, he said, it means the pilot has broken the law. Therefore clean-up is a must step. Evaluate the best clean up procedure for each situation, he said.

In closing he noted FAA is coming out with regulations by objectives. This will mean that objectives are stated and the goal will be to find methods to reach those objectives. Detailed regulations will be more limited under this procedure.

Seat belts needed

(FAA Report)

Now that spring is just around the corner, many of our fliers are thinking of dragging their airplane out of the hangar after a long winter's rest. One piece of equipment that should be checked is the seat belt. After December 4, 1981, each safety belt must be equipped with an approved metal to metal latching device. Should the seat belts on your airplane not be of this metal to metal type, contact your local friendly mechanic to arrange for their replacement.

Congress now reviewing FDA laws

By Lois Trapp

Farmers were among the first to demand food and drug safety efforts. They understood that their customers wanted to know the food they bought was good, and they knew also that they were being victimized by unsavory practices. Indeed, some of the first and most effective Food and Drug laws were passed in North Dakota.

In 1902, E. F. Ladd, a chemistry teacher at the North Dakota Agricultural College, and chemist for the new experiment station, issued Bulletin 53, which detailed shocking adulterations: canned foods preserved and flavored with chemicals, colored with harmful aniline dyes, sweetened with saccharin, diluted with water and short in measure; coffee mixed with roasted peas, alum added to flour, paint diluted with chalk and water, fertilizer with little plant food.

Through his efforts, the basic pure food and drug law of the state was passed in 1903—a law which became a model for other states. It was a law with the teeth of publicity as enforcement. The experiment station was required to analyze suspect food and beverages, and to furnish twice a year, a list of adulterated foods to be published in the official county newspapers, together with the brand name, the adulterant and the manufacturer.

Ladd became pure-food commissioner, pure-paint commissioner, oil inspector, hotel inspector, and grain inspector. His efforts in the consumer field led to his being named president of the Agricultural College, and later a U.S. Senator.

Although the first pure food legislation was introduced in Congress in 1879 and although it was obvious, as interstate commerce grew, that the states could not effectively regulate pure food standards, there was opposition for a quarter of a century to federal legislation. The opposition posed the philosophical question: would federal control of food jeopardize freedom?

In 1906, a federal act banning the trading of adulterated or misbranded food was passed. As a result of congressional compromises, there were serious weaknesses in the bill.

While the law defined adulterated or misbranded food, it failed to include any reason for banning the addition of a poisonous substance or any list of specific ingredients which, added to food, would mean an automatic ban. There was a lack of definition of acceptable levels of substances which could be added. It also did not cover cosmetics or prohibit therapeutic claims.

Over the years, amendments were added and the laws changed, often over the objection of the food and chemical industries. In 1927, the Bureau of Chemistry became the Food, Drug and Insecticide Administration, a separate unit of the USDA.

In 1938 the Federal Food, Drug and Cosmetic Act was passed as part of the New Deal package. This act did not provide for pre-market testing of products or require that a drug be effective as well as safe. The burden of proof was on the government to prove hazard to the public.

The use of agricultural chemicals and food additives increased in the 1940s. Pesticides, herbicides, hormone implants, all increased agricultural production, and to some degree, made farmers their prisoners. They were, on the one hand, anxious to be sure there was no ill effect on them or their animals. On the other hand, a sudden ban on the use of a product could spell financial loss.

In 1949, a select committee was appointed in Congress, headed by Rep. John Delaney of New York. Over a two and a half year period, they held hearings as to how the "chemicals in food" problem should be handled. Their report recommended that chemicals to be used in or on food should be tested to

establish their safety prior to their use and the same be true of substances added to food products to improve them or facilitate processing or packaging.

These hearings had an important bearing on subsequent amendments and the 1958 amendments were chaired by Congressman Delaney. The greatest change in food safety regulations was authorizing the Food and Drug Administration to approve of food additives before they could be used. This created a complex situation: How could an additive already in use be declared safe?

The 1958 used these procedures:

1. All new additives were subject to pre-clearance.
2. Additives already on the market had a 30 month grace period in which tolerance levels were to be established.
3. All substances that were on the Generally Recognized As Safe list were exempt from regulation.
4. Additives already approved under the 1938 Act were to be checked for safety and could be removed if hazardous.

Enter the Delaney Clause. The clause stipulates that no additive shall be deemed to be safe if it is found, after tests which are appropriate for the evaluation of safety of food additives, to induce cancer in man or animal.

While the clause was opposed by some scientists, and by the Department of Health, Education and Welfare, who argued that a safe level in foods was entirely different from the massive levels at which substances might induce cancer in laboratory animals, Delaney made it clear that the FDA would have to accept it or there would be no amendments.

It was the Delaney clause which led to the saccharin ban and the nitrite scare. The ban on nitrites, which would have been a disaster to the pork industry,

was averted when insufficient evidence was found to ban sodium nitrite, a meat preservative used in curing meats.

The 97th Congress will be considering food safety amendments, with hearings started in November. With the Reagan Administration's call for deregulation in many areas, the consumer advocates will be very suspicious of any lessening in standards of safety. Food processors and some farm groups content that some regulations are too stringent.

The FDA proposes a definition of "safe" to mean: "the absence of significant risk under the intended conditions of the use of a substance in reference to the health of man or animal."

Proponents of the new rules argue that there is a "risk-versus-benefit" ratio and that present mechanisms consider only risk; that policy makers have ignored the right and responsibility of consumers to freely choose acceptable risk.

Opponents argue that the "risk-versus-benefit" argument is a cynical disregard for the safety of food, drugs and chemicals in favor of profits. It promises to be a lively battle and one that farmers will be watching closely.

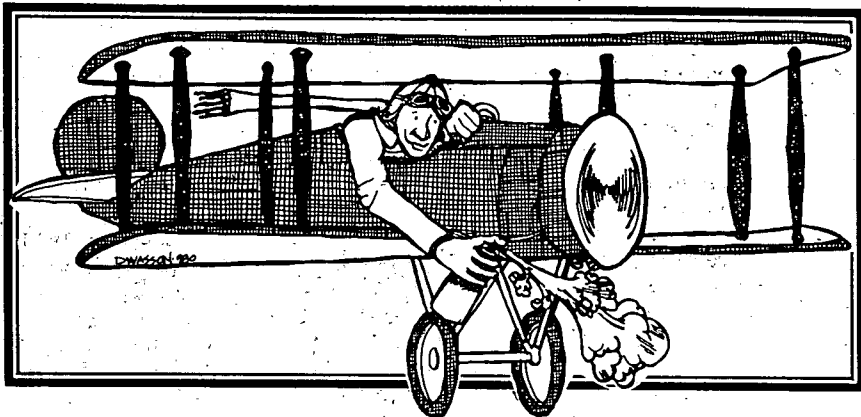
Dupont label

DuPont has just released a revised experimental use label on their new herbicide Glean, according to C.V. Eberlein, extension weed specialist at North Dakota State University.

The new Glean label restricts use rates of Glean to 1/6 to 2/3 ounce per acre of product in wheat and barley, and 1/3 to 2/3 ounce per acre of product in fallow that will be planted to wheat.

Glean will cost \$14.50 per ounce of product or \$2.42 to \$9.67 per acre at recommended use rates of 1/6 to 2/3 ounce per acre, according to the specialist.

Explores ag role in state economics



By Patricia J. Estes

The role of agriculture in the economics of the 80s was explored by Norbert Darrow, NDSU, at the North Dakota Aviation Association annual convention in Dickinson in late January.

Agriculture represents 60 to 70 percent of the basic industries input into the state economy. These basic industries bring in new money, he said.

The overall export market, with agriculture playing the major role, is expanding. The world population is increasing with the biggest increase coming from developing countries.

This signals an improved agricultural export market since people have to eat, Darrow said.

As the economy of developing countries improves, the countries will buy better quality food to improve the peoples' diet.

Looking at agricultural exports by commodity, he said, the major increase is found in grains and oil seeds. North Dakota is a major producer of those commodities and is thus in a strong position.

There is pressure on the farmer, he said, to keep up with the growing product demand.

Forty percent of agricultural exports are sold to developing countries. The next largest group of buyers is the less developed countries. Central countries like China pick up the remainder.

The United States farmer, however, is currently caught in a price cost squeeze. High interest rates have hit farmers hard especially if the farmer is either just starting out or expanding.

Major export increases in grains and oil seeds

Stocks of world grain production will be reflected in prices. It is a world wide supply which impacts prices not just production in this country. In 1981, he said, the world supply was above the world needs in the market.

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The increase in farm sizes means less farms. This hurts the rural small communities. However, larger farmers are more likely to use the services of aerial spray pilots, he said. The 1981 crop year was a record one for aerial application, he noted.

Inflation also rises the value of the crop even though prices remain depressed.

Overall the balance sheet of North Dakota agriculture is healthy. There are assets of \$20 billion against debts of \$3.5 billion. Not many businesses have that healthy a debt to asset ratio, he said.

However, he cautioned the real estate debt ratio is not as good. Real estate makes up 69 percent of the asset picture and other assets the remainder.

Another bright note, he concluded is we are increasing production of crops in North Dakota which have good export demand and price.



Norbert Darrow

Locate bee yards

A new AGNET agricultural network computer program is on line to provide timely and accurate information to North Dakota aerial applicators on the location of registered beeyards.

This AGNET program is called BEE-SITE and provides the aerial applicator with beeyard location, name of the beekeeper and his telephone number, according to Judy Carlson, Director of the Apiary Division with the North Dakota Department of Agriculture. This would allow the aerial applicator information necessary to notify beekeepers to protect their hives in and adjacent to fields that are to be sprayed.

The honeybee is attracted to most flowering plants for nectar and pollen. This activity benefits both the bees and the plants, since the honeybee will key into one particular species of plant flowers and serve an important role in carrying pollen from one plant to the next. Alfalfa, sunflower, sweet clover, mustard, rape seed, buckwheat, fruit trees and garden crops are frequently visited by honeybees.

With many beeyards located near sunflower, problems develop when spraying is required during the bloom period. During the past few years, seed weevil populations have been quite high in the southeastern one-third of North Dakota, says Dennis Kopp, Extension Entomologist at North Dakota State University. Unfortunately, the proper time for insecticidal control of the seed weevil coincides with the period of peak bee visits to that crop. If steps are not taken to protect bees foraging in blooming sunflower, substantial bee kills can occur from seed weevil sprays, Kopp cautions.

BEE-SITE is one program listed on AGNET, the computer system now available at each County Extension Office. This program lists all registered beeyards, including pollination yards. Aerial applicators may obtain a listing of the beeyards in one or more townships in one printout. This printout will contain the legal description of the location of the beeyard to the nearest quarter section, type of yard (commercial, non-commercial or pollination), beekeeper's name, address and telephone number. The North Dakota Department of Agriculture is responsible for keeping the list current. The list is updated daily, and subject to change.

By using this program, hopefully the number of bee kills will be reduced. The North Dakota Department of Agriculture would appreciate any infor-

mation regarding beeyards not listed on BEE-SITE.

The BEE-SITE program was written by Judy Carlson, North Dakota Department of Agriculture, Bismarck, ND and Douglas Anderson, ND AGNET, NDSU, Fargo, ND.

Dry bean label

Dry edible beans along with sweet and field corn have been added to the label of an animal repellent produced by the Miller Chemical and Fertilizer Corporation. This product, Miller Hot Sauce Animal Repellent, has applications limited to "before the edible portions begin to form and do not use treated foliage for animal bedding or feed."

Also included on the label are other beans, cucumbers, melons, peas, squash and tomatoes, according to Miller, which said the product has been used for two years in various tree applications.

This animal repellent will be an addition to the limited protection growers had from deer, rabbits and mice. The repellent is made from hot peppers and the taste repels animals from eating the treated foliage, the company claims.

The repellent is used in rates of 6 to 8 fluid ounces per 100 gallons of water, for a low cost per plant protected. Applications of the product may need to be repeated during the growing season after new and unprotected growth has emerged, the company noted.

Prop failures reported

(FAA Report)

Propeller blade shank failures have occurred on aircraft equipped with Hartzell compact propellers; the failures resulting from high stresses produced by overspeed conditions. Because of these failures, AD 77-12-06 was issued requiring that Hartzell "Y" shank propeller blades be inspected and/or reworked in accordance with Hartzell Service Bulletin 118A. This service bulletin also requires the testing of the tachometer for accuracy at the initial inspection and at each annual inspection thereafter. The tachometer must be accurate within 25 RPM or be replaced.

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- 1 - 1975 Cita Bria 7GCBC
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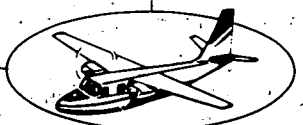
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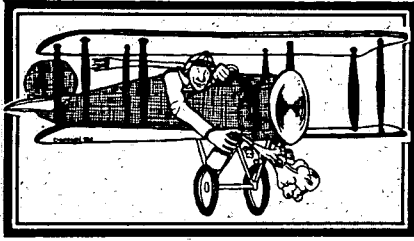
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In defense of pesticides . . .



1. This commentary on Daniel Zwerdling's article entitled "The Pesticides Plague," published in "The Washington Post" on March 5, 1978, was prepared by a task force including Boydie E. Day (chairman), Department of Plant Pathology, University of California at Berkeley; W.H. Luckmann, Department of Entomology, University of Illinois; J.R. Phillips, Department of Entomology, University of Arkansas; and Robert H. White-Stevens, Bureau of Conservation and Environmental Science, Rutgers University. The task force and the publication of their report were sponsored by the Council for Agriculture Science and Technology, 250 Memorial Union, Iowa State University, Ames, Iowa 50011. Telephone (515) 294-2903.

Prepared by Council for Agriculture Service and Technology

Since 1910, total American farm output has increased tenfold, production per man-hour has increased more than tenfold, and yield per acre has increased sixfold. Each person employed on the farm now produces food and fiber for 53 of his countrymen and another 20 or so persons in other countries. This revolution in production is due to better technology, largely the breeding of better plants and animals, farm mechanization, and the greater use of fertilizers, pesticides, and growth regulators.

Nowadays, most people accept agricultural abundance as a matter of course, along with better health care and other advances in technology. A few people object to modern farming, complaining that new varieties do not taste good or have other faults. Machines are opposed as dehumanizing, and chemicals are claimed to be unnecessary and to cause more problems than they solve. This is the theme of an article about pesticides by Daniel Zwerdling that appeared in "The Washington Post" on March 5.

According to Mr. Zwerdling, we originally had few pests, and these caused little trouble until modern pesticides were invented. He claims that pesticides create superstrains of weeds and insects that did not exist before. Mr. Zwerdling is of the opinion that these monster pests are on the

verge of wiping out the Corn Belt and other major agricultural areas of the country. He claims also that the use of pesticides changes the nature of crop plants, making them more vulnerable to pests. Chemical pest control is unnecessary according to Zwerdling. He argues that the chemical industry persuaded farmers to start using pesticides; and, although these turned out to be of little or no value, farmers now have the pesticide "habit" and aren't able to stop using them. The solution, according to him, is for farmers to "kick the habit," to stop using pesticides. Pest problems will then solve themselves.

There are numerous flaws in these arguments, not the least of which is Mr. Zwerdling's low opinion of the mental capacity of farmers. He asks us to believe that farmers in the United States and worldwide are foolish enough to adopt, and make standard practice, expensive products and procedures that not only are ineffective but usually cause them harm. We are asked to believe that farmers are unable to understand so simple an economic proposition and instead become enamored of chemicals as a kind of contagious "habit" that they cannot break.

Mr. Zwerdling reaches his conclusion that pesticides are essentially worthless on the basis of an assortment of half-truths and untruths. To suggest a proper conspiratorial background, he claims, for example, that parathion was developed by the Pentagon as a chemical warfare weapon. Actually the original research was done by the I.G. Farbenindustrie in Germany, and the technology came to other nations from that source. Other untruths include the statement that attempts were made to eradicate the boll weevil by use of DDT and that this generated an "armada of super-weevils immune to DDT." The fact is that there has been no attempt to eradicate the boll weevil using DDT, nor has DDT in any way produced a "super weevil."

The notion that 2,4-D may have caused the epidemic of southern corn leaf blight in 1970 is nonsense. The causes of this disease outbreak are well known and have nothing to do with herbicide injury. The generalization that protecting crops from weed competition or treating crops with herbicides make them physiologically more vulnerable to insects or diseases is not supported by evidence.

The idea that chemical weed control makes weed problems worse is contradicted by worldwide experience. Herbicides have restored the productivity of millions of acres of land formerly heavily infested with noxious weeds. The acreage of noxious perennial weeds in the U.S. has declined steadily in recent years.

Contrary to Mr. Zwerdling's statement, the "green revolution" did not invent or even extend monocultures as a means of crop production. The term green revolution applies to the diffusion of appropriate modern agricultural technology into the underdeveloped areas of the world. Monoculture, the practice of growing one crop in a field at one time, has been a standard procedure since biblical times and is described and defended at length by Roman writers on agriculture.

Mr. Zwerdling looks upon the rapid increase in the use of pesticides as a measure of their failure rather than their usefulness. Virtually all of the recent increased use of pesticides is in herbicides and is part of a worldwide trend to substitute these chemicals for tillage as a means of weed control. The saving in fuel alone virtually dictates this change. The new procedures called conservation tillage, some of which involve use of pesticides, can save energy, increase yields, and greatly reduce soil erosion. Such procedures, wherever applicable, are strongly supported and promoted by the U.S.D.A. Soil Conservation Service, the Soil Conservation Society of America, and most soil, water, and crop scientists in the developed world. The average annual loss of soil from tilled land is about 10 tons per acre per year; eroded into streams and valleys by wind and water. Conservation tillage may reduce this loss by 50% or more.

Mr. Zwerdling, who seems unnerved by the knowledge that organisms often adapt to control measures, feels that these must surely be monsters or some kinds of superpests. It is biological orthodoxy that any control measure leads to some degree of resistance by the pest to that measure. For example, our cropland weeds are remarkably resistant to tillage as a result of exposure to intensive cultivation for thousands of years. Fly swatters select out strains of flies with a quicker reaction time. Sulfa drugs caused selective growth of bacteria resistant to these chemicals, and the same continues for their

replacements; the modern antibiotics. Fleas will someday become resistant to certain pesticides and flea collars. The results will not be monster fleas or superfleas, but will simply be ordinary fleas resistant to a certain kind of pesticide or flea collar. The same is true of resistance generally. We need new kinds of flea collars and medicines and traps and plows to stay even or perhaps get ahead of the game. Each new procedure becomes more or less obsolete as time passes. It is a game that we can never win completely. It is simply evolution in action, and it applies to all living things and all measures applied against them, whether chemical, physical, or biological. Perhaps Mr. Zwerdling's despair over the status of pest control is his way of recognizing these dismal facts.

There is clearly no permanent solution to protecting ourselves and our resources from pests. Yet there is more to the game than simply quitting and trusting to nature as Mr. Zwerdling recommends. Two-thirds of our pesticide use is weed killers. Weeds develop resistance to chemicals only slowly, and with rare exceptions there has been no serious impairment of the effectiveness of these chemicals over the 20 or 30 years of their intensive use as a result of the evolution of resistance. The same is true of common seed protectants and fungicides. Bordeaux mixture, an important fungicide, has been heavily used for nearly a century with essentially undiminished effectiveness. Sulfur has been used as a multipurpose pesticide at least since the time of the ancient Greeks.

We can expect many of our current pesticides to be around, functioning quite well, a century from now. These will be augmented by other new and more effective chemicals. We can still expect to be using plows and rakes and mowing machines and traps, and we can still expect to have to work hard at the never-ending job of pest control. And no doubt we shall continue to have instant experts to be perplexed by it all.

Perhaps parathion or the flea collar will be gone in 10 or 20 years. But then, who is to say that some better way of accomplishing the same thing will not be invented? In any event, science will have reduced the need for constant scratching for one generation of dogs, which surely isn't all bad.

Of interest to ag sprayers . . .

Pesticide accidents

Agriculture Commissioner Mark Seetin announced today that five other state agencies have entered into an agreement with the Minnesota Department of Agriculture to expedite state government response to incidents involving pesticides and fertilizers that have potential threat to public health and safety.

Co-signers of the pact with Agriculture are the Minnesota Departments of Health, Public Safety, Natural Resources, Transportation, and the Minnesota Pollution Control Agency.

The agreement established an emergency response team composed of specialists from each of the state agencies. As the lead agency the Minnesota Department of Agriculture coordinates the team activities so as to safeguard the public and the environment from possible exposure to an incident involving pesticides and/or fertilizers. An incident might include: transportation accident, flood, leak, spill, explosion or

fire.

In the event of an agricultural chemical incident, the team response will be to:

1. Provide technical assistance to local government agencies so as to help evaluate the extent of the potential threat to public health and safety; advise appropriate individuals on proper handling of the involved chemicals; and monitor water, soil and debris for existing or potential threat to man or the environment.
2. Provide information regarding appropriate disposal and decontamination methods.
3. Insure that maximum protection of the environment is provided.
4. Gather pertinent information for health risk assessment and followup monitoring.

Minnesotans involved with or having

knowledge of any incident involving pesticides or fertilizers may contact the new emergency response team at the following telephone numbers:

Minnesota Department of Agriculture, (612) 297-2528 during office hours (7:30 a.m. to 4:30 p.m. week days), or (612) 459-6486 during non-office hours; Minnesota Pollution Control Agency, (612) 296-7373, a 24-hour telephone.

Written inquiries regarding the emergency response team should be addressed to David W. Dally, Pesticide Control Specialist, Agronomy Services Division, Minnesota Department of Agriculture, 90 West Plato Boulevard, St. Paul, Minnesota 55107.

Will there be enough food

"Will There Be Enough Food?" is the 82nd volume to carry the title, Yearbook of Agriculture. This designation formally began with the 1894 volume and a Yearbook has been issued annually since, with a few exceptions due prin-

cipally to wartime suspension of publication.

As an annual volume dealing with agriculture, however, the Yearbook stems from the 1840's, when Federal agriculture was under the Commissioner of Patents. In 1849, the Commissioner's annual report was issued in two parts, and Part II, Agriculture, was a forerunner of the present Yearbook.

"Consumers All," the 1965 Yearbook, has achieved the widest overall distribution. Congress ordered a full reprint for its own use, more than 125,000 copies were sold by the Superintendent of Documents, and two commercial publishers issued paperback reprints. Total distribution of the 1965 Yearbook is estimated at over 750,000 copies.

Commercial publishers have reprinted several other Yearbooks of Agriculture as paperbacks — including "Food for Us All," the 1969 Yearbook, "Shopper's Guide," the 1974 Yearbook, and "Living on a Few Acres," the 1978 Yearbook.

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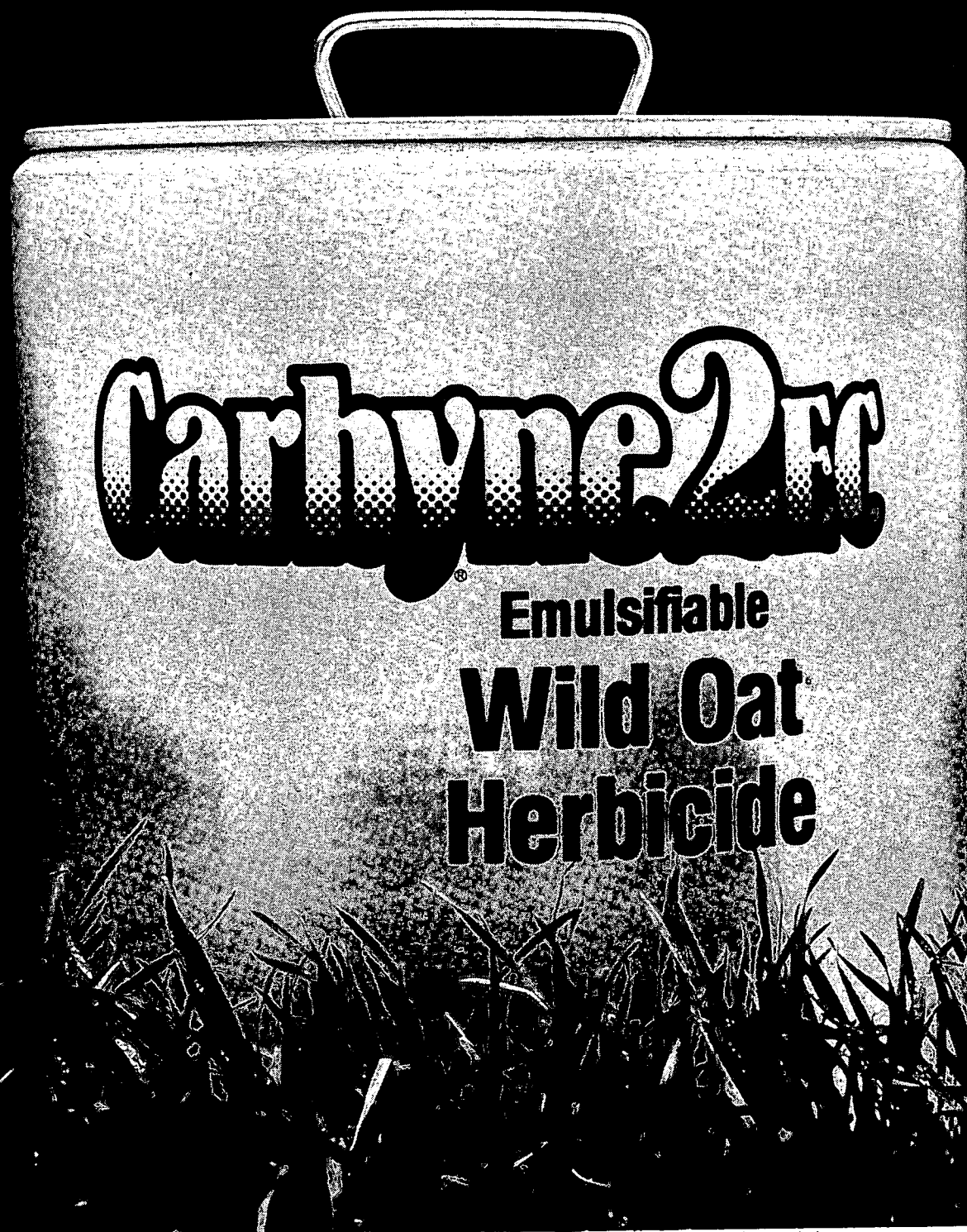
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*Carbyne 2EC for use against annual (Italian) ryegrass is limited
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The following are members of the North Dakota Aviation Association Booster Club.

This membership, above and beyond regular or industrial membership, helps to support the operating costs of the annual NDAA convention; publication of Relative Wind and overall NDAA budget through extra monetary contributions.

The NDAA Board of Directors, on behalf of the membership, extends a thank you for this Booster support.

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FAA reports Expanded tower (ETEC)

(FAA Report)

To enhance the air traffic system and improve service, tower en route control has been expanded by extending the geographical/vertical limits and developing new routes at selected approach control facilities. The program will allow pilots in many areas to transition from one point to another without entering Center airspace. The expanded tower en route control (ETEC) program will be applied, generally, for non-turbojet aircraft operating below 10,000 feet, and for flights of two hours duration, or less. Longer flights may require extensive ATC coordination which could result in unanticipated delays.

Specific route, altitude, and city pair information will be disseminated by regional offices through letters to airmen. Graphics and route description will be published in the January 21, 1982 edition of the Airport/Facility Directory.

Pilots are encouraged to file these routes when desiring to participate in the program. Tower en route will be expanded nationally as it is further developed. In North Dakota, tower en route is currently available between Fargo and Grand Forks.

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Mills asks for ATCO cooperation in 1982



Lee Mills

By Patricia J. Estes

Lee Mills, Chief FSDO, Fargo, asked cooperation of the ATCO sector of N.D.

aviation during the N.D. Aviation Association annual convention this winter.

Mills noted that FAA inspection of ATCO operations is not intended to be an advisory relationship but one to assist ATCO operators in complying with FAA regulations.

These inspections can be a learning tool for ATCO managers, he said. The operators manual can be a key management tool rather than just a set of records kept to satisfy FAA regulations.

During inspections, Mills said, interesting data is found, particularly in record keeping. Sometimes the proper paperwork is not completed.

Professionalism, he said, dictates doing the paper work in a timely complete manner.

He said he realized that mechanical directives are sometimes difficult to read and follow in order to be in compliance. However a record of com-

pliance showing when, how and what is needed.

Pilots rely on mechanics to fill out such forms. At inspection time oversights by mechanics are discovered. Full complete reports would alert the pilot to these situations. With various system checks, records must show dates checked.

The pilot, Mills said, must motivate mechanics to do a complete professional service.

Accurate records on overhauling, for instance, are needed. If the engine was overhauled were the propeller and accessories included in the overhaul.

Flying under minimum equipment is allowed so the person can return an aircraft to home base for work and is not meant for the plane to continue in the air in that condition, he noted.

Keeping a maintenance log book on the plane is a good tool, he said. Pilots can then log observations in flight of mechanical problems. These problems

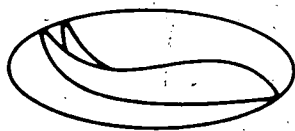
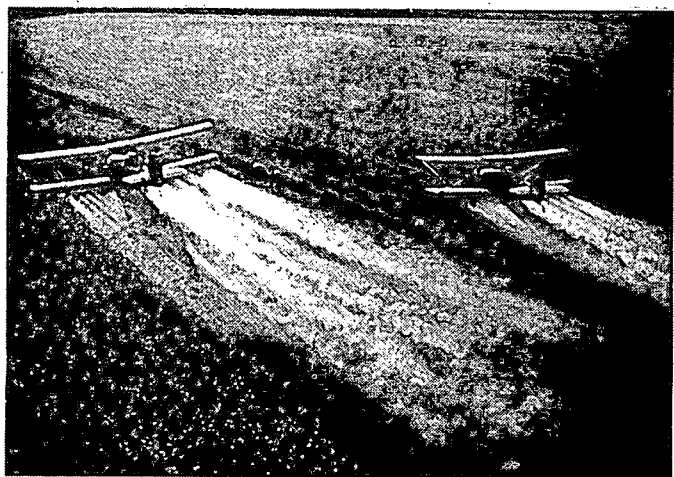
are not then forgotten and can be taken care of when on the ground.

Mills also cautioned ATCO managers and pilots to be aware of the difference between ride sharing and an ATCO operation.

FAA report

Only five years after it relaxed a 1960 regulation requiring 12-inch high aircraft registration numbers, the FAA is again requiring the larger numbers. The rule, effective last November 2, does not require immediate repainting, however. Aircraft presently displaying three-inch numbers, and new ones manufactured before January 1, 1983, will be allowed to retain the smaller numbers until they are repainted or the numbers are restored. Not affected by the new rule are small aircraft used for exhibition purposes, small aircraft built at least 30 years ago, unusually configured aircraft, and aircraft with experimental certificates that operate as exhibition or amateur-built aircraft.

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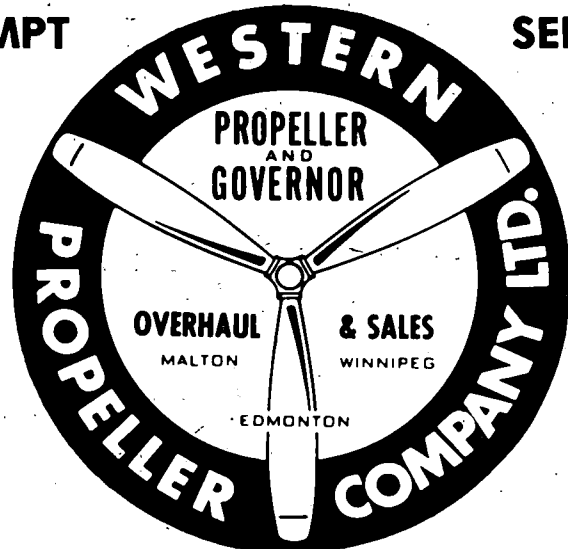
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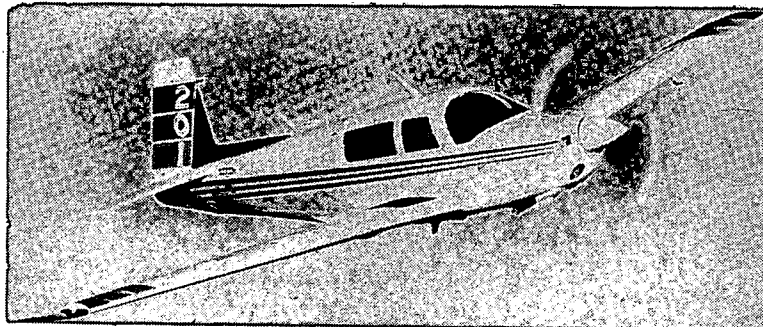


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Around the state

ASHLEY is planning to grade and double armor seal a new runway (NW-SE 4000'). Negotiations for the county crew to do the work are underway. Hopefully this project can be completed this summer. Ashley is an example to show the importance of an airfield to enhance industrial development and marketing of local products.

CARRINGTON will seal coat both runways this summer. They may use a new rubberized seal coat on one runway and the conventional seal coat on the other. This would allow to analyze the cost comparison, product reliability, crack retention, surface texture and other items.

MEDORA The Aeronautics Commission staff is reviewing preliminary plans to construct a 4000' runway on the butte by town. Will involve a large quantity of dirt to fill a coulee to acquire the runway length. Another project by the staff is pending upon the U.S. Army Corps of Engineers' approval to lease the airstrip below the Garrison Dam to the Aeronautics Commission.

LEEDS has had meetings with the Highway Department on routing the new highway across their runway. Plans for 1985 or later will necessitate a new airport for the community by this action. Their board must start looking for land for replacement of the airport near town.

KINDRED will hard surface the 2600' gravel runway constructed a few years ago. Funding for this project is possible by the Regional Airport concept involving the communities of Kindred and Davenport with the four surrounding townships.

TURTLE LAKE is again trying to locate a site for an airport. Last year's plans fell through and they will consider some land 1 mile east of town near the canal.

LISBON is considering forming an Airport Authority to undertake the following projects: New runway lights and wiring system, lighted wind cone, rotating beacon and painting the runway. They had done a seal coat on the existing 3050' runway last year.

OAKES must consider maintenance of their new airport asphalt surfaces. Cracks are appearing at stress points due to the freeze-thaw action of this season. They will contact some rubberized crack filling firms for price quotes. If you need information on crack filling, call the N.D. Aeronautics Commission. This expensive asphaltic public investment must not be overlooked and repair every year is a must.

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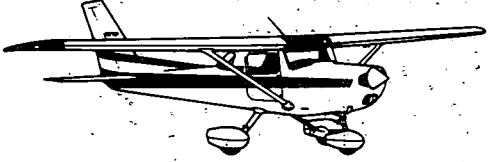
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