

Northwest School News

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Crookston, Minnesota, April-May-June, 1958

NUMBER 6

Crops and Soils Day to Be Held July 16

O. C. Soine

Plan now to attend the annual Crops and Soils Day at the Northwest School and Experiment Station, Crookston, on Wednesday, July 16.

The morning program will begin at 9:30 o'clock with a field visitation of small grains, legume, chemical weed control, and fertilizer plots. The field tours will be concluded by noon. A very interesting program featuring some aspects of the Minnesota Centennial theme is being planned for the afternoon program.

A special invitation is being extended to the women of the Red River Valley area to attend this year's Crops and Soils Day. A speaking program of special interest to the women will begin at 9:30 in the morning. The afternoon will be given over to guided tours of the vegetable garden, flower and small fruit plots.

The annual meeting of the Red River Valley Crops and Soils Association is being planned for 3:30 p.m. in the school library.

Plan now to visit your Experiment Station on July 16.

—by Dr. O. C. Soine, Agronomist
Northwest Experiment Station

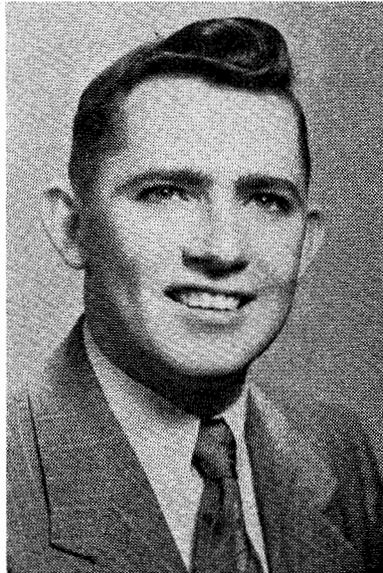
Building Contractors Move In at Northwest School

The general contractor moved on the Northwest School of Agriculture campus on March 31 to begin work on the rehabilitation of Robertson Hall dormitory and construction of the new classroom building.

At this time, the inside of Robertson Hall is almost completely removed and a new slab of concrete is being poured on the first floor. When completed, Robertson Hall will be completely rehabilitated with new stairways, completely new bath rooms, and each room will be re-worked to include built-in wardrobes and study desks. New windows and window casings are being provided and the building will be completely replastered. The counselor's apartment area will be re-done. It is hoped that new beds and mattresses can be purchased. All this adds up to a new dormitory building as far as the living quarters are concerned.

The excavation is complete and by the time you receive this news item, the foundation slab will be poured for the new classroom building. The new classroom building when completed will contain seven classrooms, three generous laboratory spaces, storage space, and office space for teaching staff as well as for the Experiment

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Dr. Frederick Appointed to NW School Staff

Dr. Edward C. Frederick joined the staff of the Northwest School and Experiment Station on January 1, 1958, to assume his duties in the Animal Husbandry department. Dr. Frederick will work primarily with the dairy herd and will assist with other livestock work according to the needs of the department. He will also serve as an instructor in animal husbandry subjects.

Dr. Frederick was born and raised near Blue Earth, Minnesota, on a dairy farm. He took his undergraduate work and his graduate work at the University of Minnesota. Also, he spent some time in the military forces. Dr. Frederick comes to the Northwest School and Northwestern Minnesota well-trained and highly recommended.

Certainly, the dairy industry will benefit from his training and experience. There are changes being made in the management and the handling of the dairy herd at the Northwest Experiment Station that will result in helpful repercussions among dairymen in the Red River Valley area.

Dr. Frederick is married and has four children. He is living, temporarily, on the Northwest School campus.

PLAN TO ATTEND
Alumni Reunion—June 28
Crops Day—July 16

NW School Alumni Plan to Hold Reunion June 28

The Alumni Reunion will be held at the Northwest School of Agriculture on the evening of June 28, according to Arnold Hanson, class of '29, president of the Northwest School Alumni association.

While the five-year class reunions of classes graduating in years ending in three and eight are featured at the Alumni Reunion, yet members of all classes and former students are urged to attend this get-together. For those who are interested, resident faculty will be pleased to conduct tours of the campus and experiment station. Coffee and cream will be available to picnickers.

The Alumni dance will be held at 8:30 p.m. with the Jimmy Dunn band furnishing the music for the dance. A number of prizes will be given away at the dance. This year, no afternoon program is scheduled for Alumni Reunion.

Committees appointed to serve for Alumni Reunion are: Entertainment—H. H. Lysaker and Jaroslav Kruta; Decorations—H. W. Soderburg, E. C. Frederick, and E. C. Miller; Ticket Sales and Admission—O. C. Soine and E. N. Reiersgard. Former students and alumni in and around Crookston are invited to report at the school, during alumni reunion week, and assist in decorating the gymnasium for the dance.

Next year, with the completion of the new classroom building and rehabilitation of Robertson Hall, plans are being made to have open house at both of these buildings at the Alumni Reunion.

—E. N. Reiersgard, Principal

Cattle Feeders Hear Results of Cattle Feeding Trials

More than 200 cattle feeders from the Red River Valley area attended Cattle Feeders' Day on April 18 at the Northwest School and Experiment Station.

The 1957-58 cattle feeding trials results were outlined by Dr. Edward Frederick, a new member of the animal husbandry research staff at the Northwest Experiment Station. This was a particularly favorable cattle feeding year at the Northwest Experiment Station. The thirty-two steers graded out very well and returned better than \$90 per head over all feed costs.

D. Reimer, head of the Animal Husbandry department at the Northwest Experiment Station, feels that more cattle feeding should be carried on in the Red River Valley area, and, ac-

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Northwest School News

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B. E. Youngquist, Superintendent
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Crookston, Minnesota

The Price of Organic Matter

O. C. SOINE

How much is Organic Matter worth in crop production? This question is both easy and difficult to answer.

Soil organic matter cannot be measured entirely in dollars and cents because it has several attributes and values that last many years. A soil rich in organic matter has good physical condition, better aeration, absorbs more moisture and produces good crops. The key to good organic matter is the rate of decay and the type of material added to the soil from the decomposition.

Organic matter refers to all plant and animal matter that is added to the soil both as living plants like alfalfa, meadow fescue and crop residues like straw and stubble.

An experiment was undertaken in 1953 at the Northwest Experiment Station, Crookston, to measure the effect of three different kinds of organic matter on the yield of wheat. Alfalfa, a legume crop, meadow fescue, a grass, and oats stubble were the types of organic matter used. Two crops of alfalfa, one of meadow fescue and two crops of oats were taken off the plots before they were plowed in the fall of 1954. The first test crop of wheat was sown in the spring of 1955 and yields of wheat were taken. Each spring, nitrogen fertilizer at the rate of 0, 20, 40, 60, and 80 pounds per acre were applied across the three plots.

The yields of wheat in 1955 varied greatly from the different types of organic matter and nitrogen added. The wheat from the plots formerly in alfalfa produced the highest yield, which amount was nearly twice the yield of wheat from the plots formerly in oats and nearly four times the yield of wheat from the plots formerly in meadow fescue.

The yield of wheat following the alfalfa was 30.8 bushels per acre compared to 8.5 bushels of wheat per acre following meadow fescue—a difference of 22.3 bushels. At the present price of wheat, this difference in yield would amount to \$44.60 per acre, or in other words, plowing under alfalfa resulted in an increase of \$44.60 per acre over the yield of wheat following meadow fescue.

The difference in yield between wheat following alfalfa and wheat following oats stubble was 14.8 bushels. This difference resulted in an increase of \$29.60 per acre for the wheat plots following alfalfa over the plots following the oat stubble.

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COMMENCEMENT EXERCISES HELD MARCH 28

88 Seniors Graduate; Citizenship Awards Presented

Eighty-eight Seniors graduated from the Northwest School of Agriculture at the Commencement exercises held on March 28. This class of Seniors came from thirteen counties in Northwestern Minnesota and four counties in the state of North Dakota.

Dr. Eric Selke of the Department of Education, University of North Dakota, delivered the Commencement address. Miss Rose Johnson, organist and a member of the school staff, played the professional and recessional. The Reverend C. J. Fellger of Crookston pronounced the invocation. Ronald Filipy,

valedictorian, gave the Valedictory address; Arlene Bergh of St. Vincent, was salutatorian. The mixed chorus sang under the direction of Miss Beverly Bergh, music instructor.

Citizenship awards were presented to Arlene Bergh of St. Vincent and Ronald Filipy of Warren. The Citizenship award is presented each year to one girl and one boy of the Senior class.

Superintendent B. E. Youngquist awarded the diplomas to the graduates following the presentation of the class by E. N. Reiersgard, principal.

THE PRICE OF ORGANIC MATTER

(continued from Column 1)

In 1956, the differences were not as large but still favored the wheat plots following the alfalfa. Wheat following alfalfa yielded 23.2 bushels per acre compared to 12.2 bushels of wheat following meadow fescue and 10.2 bushels of wheat following oats stubble. In value per acre, the wheat plots following alfalfa had a net increase of \$22.00 per acre over the yields of wheat following meadow fescue and a net increase of \$26.00 per acre over the yields of wheat following the oats stubble.

In 1957, the differences were not as large but still favored the wheat following alfalfa. These plots yielded 17.6 bushels of wheat compared to 8.9 bushels of wheat following meadow fescue and 12.5 bushels of wheat following the oats stubble. The yield of wheat following the alfalfa had an increase of \$17.40 over the plots following meadow fescue and \$10.20 over the plots following the oats stubble.

When the yields for the past three years are averaged, the wheat plots following alfalfa produced \$28.00 per acre per year more than the wheat following meadow fescue and \$21.93 per acre per year more than the wheat following the oats stubble.

If a strictly monetary value could be attached to organic matter, the results from this experiment for the past three years would show alfalfa to be worth \$28.00 per acre each year over meadow fescue and \$21.93 per acre each year over oats stubble.

Why does alfalfa as organic matter increase the yields of crops that follow it? Alfalfa belongs to the legume family of plants and when properly inoculated with nitrogen-fixing bacteria, is able to utilize free nitrogen from the air. When plowed under, it can add up to 200 pounds of free nitrogen per acre. Leguminous plants decay rapidly and liberate additional plant food for crops that follow. Other grass crops like meadow fescue and grain straw stubble are very low in nitrogen and decay very slowly. Usually these crops drain the soil of available nitrogen so that the crops that follow are short of this element and other plant food.

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NW Experiment Station Using Frozen Semen in Dairy Research

E. C. Frederick

The Northwest School and Experiment Station is taking advantage of a new technique in the artificial breeding of dairy cattle—the use of frozen semen.

Frozen semen is very valuable to a research program in dairy cattle breeding in that it gives a breeding program a chance to develop even though a bull should be crippled or die. Many dairy cattle breeding research programs have been ruined because of the untimely death of a bull. This can be prevented through the use of frozen semen.

With frozen semen, a cow may be bred to a bull after his death. No one knows how long sperm cells will live in the frozen state; however, the University of Minnesota has viable semen stored for about five years. Frozen semen also gives the opportunity to breed to any bull in the world.

The Northwest Experiment Station selected bulls which fit into the breeding research program. Then, the semen of the bulls selected was frozen and is being stored in a dry-ice storage chest at the Station. As needed, the semen is thawed out and used to inseminate the cows. Many bull studs, such as Northwest Breeders, Roseau, Minnesota, handle all of their semen the frozen semen way. That is, they add glycerol to the dilutor, freeze the semen, store the semen until needed and then thaw it out and use it for breeding. The conception rates with frozen semen are comparable to fresh liquid semen.

The advantages of frozen semen to the bull stud include less semen wastage so a need for fewer bulls and a reduction in shipping costs as daily semen deliveries to technicians need not be made. The disadvantages include extra cost involved in freezing the semen and maintaining it at 110 degrees below zero. Individual dairymen can also take advantage of frozen semen. The main headache with frozen semen is storage. It must be stored at

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Thirteen Counties to Be Represented by 4-H'ers at Club Week

4-H club delegates of Northwestern Minnesota 4-H clubs are making preparations to attend district 4-H Club Week at the Northwest School, June 2-6.

An excellent program of instruction and recreation has been arranged by state 4-H club agents, county Extension agents, and Northwest School faculty.

All 4-H club members will be divided into squads for afternoon sports and crafts programs as well as good-grooming workshops. Each county will have two older 4-H boys or delegates attending the welding short course held during 4-H camp. Sessions will be held for adult 4-H leaders and agents during camp week. Counties will be divided in two sections for camp attendance with identical programs for each group. Counties attending in first group, June 2-4, will be: Becker, Clay, Clearwater, Mahanomen, Norman, East and West Otter Tail, and East Polk. Attending the second group, June 4-6, will be: Kittson, Lake of the Woods, Marshall, (continued on page 4, col. 1)

THE PRICE OF ORGANIC MATTER

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In the second part of the experiment, the various rates of nitrogen were applied each spring. The 1955 results show that the yields of wheat following alfalfa were not increased by adding any of the rates of nitrogen. In fact, the 80 pound rate of nitrogen depressed the wheat yields.

The 1956 results showed that only the 80 pound rate of nitrogen increased the wheat yields following alfalfa by 3.5 bushels per acre.

In the 1957 trials, all the different rates increased the yields of wheat following alfalfa from 3.1 bushels for the 20 pound rate to 6.2 bushels for the 40 pound rate. These increases the third year are to be expected because after three years of cropping, the beneficial results from plowing under alfalfa are beginning to decrease.

All of the wheat yields from the plots following meadow fescue and oats stubble were increased by the addition of nitrogen fertilizer. However, the 1955 results show that the highest rate of nitrogen failed to increase the yields from these two plots equal to the yields of wheat following alfalfa. The same is true for the 1956 results.

The 1957 results show that the three highest rates of nitrogen fertilizer on the plots following meadow fescue and oats stubble equaled the yields from the plots following alfalfa.

The results from this experiment clearly show that the proper type of organic matter can greatly increase crop yields which mean greater net return per acre.

By Dr. O. C. Soine, Agronomist
Northwest Experiment Station

Many Homemakers Plan to Attend Women's Camp June 10-13

Interesting Program Scheduled—Also Crafts and Recreation

Minnesota and North Dakota homemakers in the Red River Valley are making plans to attend the 33rd annual Women's Camp at the Northwest School of Agriculture, Crookston, June 10-13.

Miss Marion Parbst, Home Economics Department head at the Northwest School, will serve as Women's Camp leader.

Homemakers who cannot attend for the entire camp are invited to take part in "Day Camp" programs on June 11, 12, and 13. Special craft sessions have been planned for day campers. Day campers are invited to bring picnic lunches or meals can be bought at the school Dining Hall at camp if meal reservations are made by June 6. Coffee will be furnished to picnickers.

The cost of Women's Camp is \$9.00 for "resident" campers; \$3.50 per day for "day" campers (includes meals, lodging); and 50 cents per day for "day" campers without meals or lodging. Camp reservations should be sent to E. N. Reiersgord, principal.

Registration will be held at the Kiehle building, Tuesday afternoon, June 10, beginning at 2:00 o'clock for resident campers, and on the mornings of June 11, 12, and 13, beginning at 8:00 o'clock for "day" campers.

Specialists have been secured as speakers for each day's program. Mrs. Eleanor Loomis, consumer marketing specialist, University of Minnesota, will speak to the group Tuesday evening on "South American Ways." Her topic on the Wednesday morning program will be "More Food For Your Money." Extension Nutritionist, Miss Verna Mikesh, will speak Wednesday afternoon on "Evaluating Summer Meals." Thursday will be Health and Safety Day with Mrs. L. Snyder, Polk County public health nurse, and Mrs. J. Kruta, Northwest School nurse, on the morning program discussing "Are Our Homes Ready in Case of Disaster." Miss Laura Hegstad, nursing consultant, State Department of Health, Minneapolis, will be the afternoon speaker on "Management Techniques for the Aged or Disabled Homemaker."

The Friday morning speaker will be Miss Thelma Baiert, extension clothing specialist, North Dakota Agricultural College, Fargo, speaking on "The Use and Care of New Fabrics." A craft display, party recipe exchange and recognition assembly will be held on Friday afternoon.

The special crafts program for "resident" campers will be woodcraft taught by H. W. Soderburg of the Northwest School and Mrs. H. F. Jung of Crookston. Ceramic tile work will be taught by Miss Dorothy Olson of Gager's Handicraft, Minneapolis. Day campers will have their choice of crafts participating in the following classes: Luster lace work in charge of Mrs. Art Ambuehl and Mrs. Selmer Larson of Ada; Christmas Decorations in charge of Mrs. Art Thompson and Mrs. H. H. Lysaker, Crookston; Good Reading for the Home—Miss Joyce Johnson, school librarian, Stephen; and Norwegian Folklore Exhibit—Mrs. Olaf Hildahl of Roseau. (continued on page 4, col. 3)



Pictured above are the 1958 Women's Camp officers. Reading from left to right: (Seated) First Row—Mrs. W. J. Cumming, East Grand Forks—vice-president (deceased); Mrs. Allen Miller, Crookston—president; (Standing) Back Row—Mrs. Ella Anderson, Stephen—secretary, and Mrs. Thomas Fixter, Thief River Falls—treasurer. Mrs. Obert Fossay of Moorhead, sergeant-at-arms, is not in the picture.

R. S. Dunham, "U" Weed Expert and Former NWS Staff Member, Retires

Professor Ray S. Dunham, teacher of agronomy and weed control specialist, has been on the University of Minnesota staff 37 years. He will retire in June.

In 1921, Professor Dunham joined the University staff as an agronomist at the Northwest School and Experiment Station, Crookston. In 1945, he resigned from his position at the Northwest School to accept a position in the Department of Agronomy at the University of Minnesota, St. Paul.

During the time Professor Dunham has been on the University staff, he has been known as a leader in the Minnesota farmers' fight against weeds. Also, he has helped other research workers in the nation usher in the age of chemicals in weed control. This development has meant millions of dollars in savings to farmers. It was Dunham and his graduate students who pioneered 2,4-D for weed control in flax. "Until 1945," Mr Dunham has stated, "everyone agreed that 2,4-D could not possibly be sprayed on flax fields. We thought it would kill flax as well as weeds. But our tests showed that at proper rates, it could be practical for knocking out weeds in flax fields."

The second major development in weed control was the grass killers—TCA and Dalapon, both now widely used. Third big development was Radox, the first chemical which was recommended as a pre-emergence spray in Minnesota. This means it can be applied after the seed is planted but before it germinates. In extensive field research, Mr. Dunham found that Radox used as a pre-emergence spray at recommended rates does not hurt either corn or soybeans; but, it is one of the best answers farmers have today against foxtail and other annual grass weeds.

The fourth and most recent contribution to weed control is the butyrics—2,4-DB and MCPB, which have a type of selectivity different from any previous herbicides. Mr. Dunham's tests showed that the butyrics do not hurt small-seeded legumes such as alfalfa, clover and birdsfoot trefoil but will kill many weeds common in these crops.

A long-time member of the North Central Weed Control conference, Professor Dunham has been secretary-treasurer and president of the group. In 1956, he received a citation for outstanding work in weed control from the conference.

4-H CLUB WEEK

(Continued from page 3)

Pennington, West Polk, Red Lake, and Roseau.

Special features at 4-H camps this year will be assemblies, final one-act plays, music contests, flag raising, fun fest, Centennial movies and skits, candlelighting ceremony, and swimming.

Northwest School Briefs

News Regarding Northwest School Alumni and Former Students.

***Mr. and Mrs. Steve Pauluk, '49, visited the Northwest School campus on April 23. Steve is employed in Los Angeles, California. Their address: 411½ North Avenue 64, Los Angeles 42, California.

***Marine Corporals Rodney and Wayne Mosher (Rodney, '52; Wayne, '54) of Beltrami, were released from active military duty on February 27. Wayne was a member of the shore patrol in Long Beach, California, and Rodney played football for the 29 Palms Marine Base football team.

***Miss Ellen Ramstad and Leroy Field, members of the Northwest School faculty, are attending the spring quarter at the University of Minnesota, Minneapolis. Mrs. Jaroslav Kruta, school nurse and instructor at the school, will be attending the summer sessions at the University of Minnesota beginning June 16.

***Allan Dragseth, '57, of Eldred, attended the University of Minnesota for three months and has now returned home to assist with work on the home farm. Allan will again enroll at the University next fall.

Marriages

***Miss Lillian Jeanette Dahle of Goodridge to Lawrence W. Mietzel of Thief River Falls, on February 8, at Goodridge. They are making their home in Hoyt Lakes, Minnesota.

***Miss Leona Peterson of Park Rapids to Marvin Magsam of Euclid, on May 10, at Park Rapids. They are living at 331 N. Snelling Avenue, St. Paul, Minnesota.

***Miss Jean Stromstad of Lockhart to Palmer Vigness of Nielsville, on April 19, at Beltrami.

***Miss Marilyn Gulseth of Thief River Falls to Albert Chruszch of Angus, on March 1, at Thief River Falls. They are making their home on a farm near Angus, Minnesota.

***Miss Marian Pederson of Fertile to Peter Cerkowiak, of Lancaster, on April 12.

Births

***To Mr. and Mrs. Duane Wimpfheimer of Euclid, a daughter, on May 5.

***To Mr. and Mrs. Lawrence Dufault of Crookston, a daughter, on May 3.

***To Mr. and Mrs. Robert Kresl of Angus, a daughter, Michelle Marie, on March 30.

***To Mr. and Mrs. Matt Jansen of Hallock, a son, Mark Arthur, on March 19.

***To Mr. and Mrs. Peter A. Harder (nee Bernice Lindstrom), of Warroad, a daughter, Kathy Sue, on May 10.

Deaths

***Julius Paulsrud, class of 1910, died on March 29 at Nielsville, Minnesota. He was the father of Mrs. Clarence Sargent (nee Edna Paulsrud, '45).

***Melvin Bengtson (Bengtson), class of 1920, died on January 29, at Chicago, Illinois.

WOMEN'S CAMP, JUNE 10-13

(Continued from page 3)

Special features of the camp program will be a get-acquainted party on Tuesday evening; Centennial banquet and folk dancing party on Wednesday evening; and Centennial movies and freshmen initiation on Thursday evening.

The camp closes on Friday afternoon, June 13, with a "coffee hour."

Women's Camp officers for the 1958 camp are: Mrs. Allan Miller, Crookston—president; Mrs. Ella Anderson, Stephen—secretary; Mrs. Thomas Fixter, Thief River Falls—treasurer; and Mrs. Obert Fossay, Moorhead—sergeant-at-arms.

—By Miss Marion Parbst, Home Economics Department, Northwest School

NWS USING FROZEN SEMEN IN DAIRY RESEARCH

(Continued from page 2)

110 degrees below zero or colder in order to preserve the life of the sperm cell. It is costly for one individual to maintain a storage box at this temperature; however, bull studs are equipped to process and store frozen semen.

by Dr. E. C. Frederick, Dairy Specialist, Northwest Experiment Station

BUILDING CONTRACTORS MOVE IN AT NW SCHOOL

(Continued from page 1)

Station agronomist and for the Experiment Station horticulturist.

According to the contractor, Robertson Hall will be ready for occupancy by October 1, 1958, and the new classroom building will go into usage sometime during the year of 1959.

The new \$12,000 Seed Storage building has been built from funds provided by the 1957 State Legislature. This is completed and now in use.

Plans for the new hog house are about complete and construction will get under way in a few months.

The plans for rehabilitating certain staff houses, for the building of a beef pole barn and the turkey pole barn, as well as the horticultural tool shed, are in the process of being prepared.

This adds up to a lot of building activity going on at the Northwest School campus for the next fourteen to eighteen months.

CATTLE FEEDING TRIALS

(Continued from page 1)

cordingly, he is going ahead with the project leaders from the Institute of Agriculture to increase this particular research activity. Plans are going ahead to disperse the beef breeding herd and set up a revolving fund which will be used to increase the nutrition work done with beef cattle in the years ahead.