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Orville Vogel, Wheat Breeder

Wheat Breeding in the Pacific Northwest

by O. A. Vogel

The alliance between farmers in the Palouse region and scientists began with the establishment of agricultural experiment stations at Pullman and Moscow in 1891 and 1892. Notoriously independent, many farmers at first resisted outside experts, but were eventually won over by the tangible benefits of scientific research—increased yields and better quality crops. The case of wheat breeding is an example of the mutually beneficial partnership that arose between farmers and scientists. Orville Vogel, who came to WSU in 1931, was the leader of the cooperative wheat research team—made up of USDA scientists and scientists from the Agricultural Experiment Station at WSU—until his retirement in 1973. He is best known for having developed the wheat varieties Gaines and Nugaines, which were introduced in 1961 and 1962. Wheat yields increased dramatically as a result—by an average of 25% with much higher returns in some areas. The following article is a condensation of a paper Dr. Vogel presented at a historical association meeting.

Production Problems Prior to Initial Wheat Breeding

Sketches of historical aspects of wheat production in the Pacific Northwest were described in 1968 by Kirby Brumfield in *This Was Wheat Farming*. He reported that the first bushel of wheat was planted near Vancouver, Washington in 1825. At that time the area was claimed by England. Subsequent production spread into the Willamette Valley of Oregon and then north into the lower Puget Sound. These areas, receiving average annual rainfall ranging between 35 and 45 inches were suitable for the production of low protein grain. During periods of cool rainy harvest weather, much of the grain became severely weather-damaged before it could be threshed. The climate proved to be better suited for dairying and other crops. Therefore, major wheat production shifted east of the Cascades into the Columbia Basin area of Oregon where the precipitation was less than one-half and the winters more severe than west of the Cascades.

The new areas presented production problems unlike those from which the pioneer farmer came. Consequently, for successful wheat production the pioneers had to develop distinctly different systems of farming. The annual rainfall generally was too low for practical annual cropping. Clean following the land one year to accumulate soil moisture and then cropping it the next proved to be the most reliable system of management.

The wheat-summerfallow system of farming was not without other problems and hazards. The soil became easily powdered and therefore often severely eroded by water and wind. Rainfall during the summer and late fall often was too little to permit planting the seed and establishing stands early enough in the fall to permit the most consistent high levels of production. When planted late in dry seed beds, the seed would germinate after effective late fall rains, but often failed to emerge with satisfactory stands. Delaying the planting until after the fall rains began, resulted in more uniform stands

but the seedlings often emerged during late December or in January. These fields often resulted in severe soil erosion and disappointing grain yields.

In seasons favorable to early fall planting and desirable fall growth, the plants would grow excessively tall before maturity and therefore become susceptible to heavy losses from shattering and lodging. Because of the various hazards in producing winter wheat, many growers reluctantly planted in the spring, which often resulted in low yields and severe wind erosion.

A most welcome variety of wheat, having more desirable resistance to both lodging and shattering, was Little Club, so named because of a club-shaped head. J. A. Clark and B. B. Bayles suggested that it "was one of the first wheats grown in the Columbia basin section of Oregon." It has a facultative growth habit which permits cropping from either fall or spring planting. When fall-sown it matures early, but when spring-sown it matures late. If planted late in the fall, it would survive most winters, but if planted early in the fall it often was severely winter-injured.

Wheat planted in the spring often failed to develop its secondary root system which prevented the plants from becoming firmly anchored to the soil and to utilize more fully the accumulated soil moisture. Under these conditions the grain yields were disappointing and the fields became badly infested with annual weeds.

Expansion of wheat production in Oregon and Washington was restricted by inadequate transportation through the Cascades, both overland and on the untamed Columbia River. However, following the completion of the railroads in the 80's, wheat production spread rapidly into Washington and northern Idaho.

Pioneer farmers settling in the new areas of Washington and northern Idaho encountered problems in addition to those encountered in Oregon. Furthermore, burdensome surplus production, principally of low protein winter wheat, amplified the need for public help in developing more efficient producing varieties and a greater volume of export. These problems obviously played a significant role in the establishment of wheat experiment stations in the three states. Their initial investigations were directed primarily at studying comparative performances of available varieties and in evaluating various systems of management.

Early Breeding

The first wheat breeding in the Pacific Northwest was initiated in 1899 by W. J. Spillman at Washington State College (now Washington State University) in Pullman. His study of the segregates (offspring) from crosses led to the discovery of all possible recombinations of parental characters in the second generation. Because of reports of these observations, he has been overzealously credited with discovering some of the Mendelian laws of heredity. L. P. V. Johnson, in a review of relevant literature, concluded that Spillman came close to discovering "the fact of segregation" and the "principle of segregation" and probably would have formulated their genetic laws if wheat had had a simple single set of chromosomes instead of the complicated segregations from among three sets of chromosomes. Nevertheless, Spillman pioneered the wheat breeding and genetics which led to the breeding of varieties more adequately adapted to the climatic and soil conditions in the Pacific Northwest. He left Pullman in 1902, but the breeding and selection work were continued by Elliott and Lawrence who were responsible for the development and release of varieties originating from the first crosses.

The first six varieties (Hybrids 63, 108, 123, 128, 143, and 150) were released in 1907 and had desirable resistances to shattering and lodging. Why so many releases in a single year? One can surmise that because of very limited facilities and funding, it

was expedient to give these hybrid selections to selected growers for their determinations of usefulness in commercial production. Among these selections, Hybrid 128 proved to be the most winter hardy and because the most widely grown. Furthermore, its performance provided incentives for the concentration of breeding efforts toward the breeding for further improvements in winter wheats.

The first lax or common-headed variety of wheat developed by Washington State College was Triplet, a soft red variety released in 1918. It represented further improvements in yield and winter hardiness. The hairs from its pubescent chaff often caused severe soreness of the skin on members of the harvesting crews. Therefore the apparent increased production potential of it and other pubescent wheats were utilized only by growers able to obtain harvest crews which would endure the discomforts. Consequently, segregates with pubescent chaff were discarded in subsequent breeding.

Initial Breeding For Resistance To Bunt

Breeding for resistance to bunt was initiated by E. F. Gaines at Pullman in 1915. In 1924, Ridit, a hard red winter variety was released because it appeared to be resistant to all collections of bunt available at that time. In 1928, Albit, a soft white winter club was released to replace the heavily smutting club varieties. Ridit never became a widely used major variety, primarily because it yielded considerably less than the bunt-susceptible varieties. Albit was a better yielder but shattered notably easier than Hybrid 128.

Shortly after Gaines initiated the breeding for resistance to bunt, workers at other stations in the region and the USDA undertook the tasks of breeding for bunt resistance and conducting relevant research. A variety screening project conducted cooperatively during 1919-1922 by USDA and workers in California, Oregon and Washington, revealed a number of varieties and hybrid selections having levels of resistance usable in future breeding. Along with the newly found sources of resistance came a wave of optimism about the expected ease of controlling bunt merely by breeding for increased resistance. This optimism soon was dampened by reports of resistant varieties becoming smutty. Furthermore, during 1923-28 wheat grading smutty ranged between 27 and 62 percent.

In addition to the smut problem the marketing of wheat from the region had become plagued with far too many varieties—over 50 in 1929, for example. These problems were evaluated by leaders in agriculture during the Pacific Northwest Wheat Improvement Conference at Pullman in 1928, at which time it was decided to request funds from Congress to establish a cooperative western regional wheat improvement program. Such a program became a reality in 1930-31 with B. B. Bayles as regional coordinator.

Early Cooperative Breeding Objectives

The Cooperative Western Regional Wheat Improvement Program was organized to cover all areas west of the Continental Divide, thereby involving 11 states. The original objectives of concern to the Pacific Northwest were to breed for high-yielding, good quality white wheats resistant to lodging, shattering, bunt and the rusts. A team approach was organized with D. E. Stephens and M. M. Oveson stationed at Moro, Oregon, J. Foster Martin at Pendleton, Oregon, E. F. Gaines and I at Pullman, Washington, and V. H. Florell and C. A. Michels at Moscow, Idaho. In addition, C. S. Holton at Pullman was to study the biology of the bunt fungi, to differentiate physiological races, and to supply bunt inoculum for breeding for resistance and for

studies on the genetics of resistant reactions. Likewise, W. M. Bever at Moscow, Idaho was to investigate primarily the rusts and other diseases. Cooperative uniform varietal nurseries were also established to provide workers with up-to-date data on comparative performances of old and new varieties.

New Problems Revealed By Rex Wheat

Rex, a soft white lax-headed early maturing winter wheat, was developed and released by Oregon in 1933. Besides being resistant to bunt, it was very highly resistant to lodging and shattering and therefore soon became widely grown. However, its flour was slow to pass through the bolting screens and therefore millers strenuously objected to its production or any other new variety having similar slow-milling characteristics.

Subsequently, breeders became aware that nearly all their best high test weight, high yielding new soft white lax-headed selections had been classed as slow to very slow milling, and therefore not willingly acceptable by millers. Furthermore, the lack of suitable techniques for eliminating slow milling segregates in early generations greatly limited the breeding for acceptable milling and baking qualities in soft wheats. These problems prompted the milling industry to help organize the Pacific Northwest Crop Improvement Association in 1943 which made arrangements for commercial organizations to test a limited number of promising advanced generation selections.

The services of these organizations, although very valuable, represented mere tokens when compared with the hundreds of early generation selections which should be screened before reaching advanced stages of agronomic testing. These needs led to the establishment of the Western Wheat Quality Laboratory at Pullman in 1946, with M. A. Barmore in charge.

Complications In Breeding For Quality

Breeding for desired milling and baking qualities in the Pacific Northwest wheats is much more complex than in other major producing regions, principally because the region can produce and the market can use wheats of all market classes. Breeding efforts have been limited to the soft and semihard common white, soft white club, hard red, hard white and durum. Logically, the breeding efforts should be directed to develop hard wheats for the low rainfall areas, the semihards for the intermediate areas, and the soft wheats for the high rainfall areas.

The breeding and testing procedures and facilities have never been sufficiently sophisticated to accurately choose combinations of agronomic and quality characters best suited for the any given area. Often times a new variety ends up being most profitably grown in unexpected localities. The Wheat Quality Laboratory at Pullman was established to help screen out at least the most undesirable new selections as early as possible. However, it was equipped and staffed to evaluate selections primarily from soft and semihard white common and white club wheats and with a limited number of hard wheat selections. Its research of most concern to breeders was directed to recognize the Rex-like milling characteristics in small samples, to determine specific characteristics causing poor milling and to find a more suitable method of protein determinations of small samples.

Increased Efforts To Control Bunt

Breeding for bunt resistance in winter wheat never became a permanent solution for controlling this most dreaded disease. The appearance of new races soon after new

resistant varieties were released, and/or the unadaptability of new resistant varieties to the heavily "bunted" areas, required greatly increased efforts toward bunt control. For example, the Elmar and Brevor varieties of wheat, developed in Washington and released in 1949, were expected to greatly reduce the losses from bunt. Elmar was susceptible to races already spread by Rex and Albit, and therefore was relatively ineffective in reducing the infections. Brevor, having a combination of dominant, minor, and recessive genes for resistance, proved to remain resistant for the longest period. However, it revealed new problems which restricted its acceptance by growers. These problems were a high after-ripening dormancy which caused many seed lots to remain dormant or germinate very slowly when planted early in the fall in warm seed beds. It was found to be severely damaged by a *Cephalosporium* fungus stripe disease when planted early in the fall, also by *Cercospora* foot rot.

The resurgence of bunt losses during 1946-52 prompted public and private interests to support greatly increased funding from Congress to expand breeding and relevant research for more effective control of bunt. The increased funding became available in 1953, resulting in more than doubling the personnel in the smut laboratory and in the breeding and field testing activities within the region.

A dramatic reduction in bunt losses resulted from a combination of the release in 1955 of the Washington developed variety Omar and the introduction of a highly effective fungicide HCB for treating the seed. Omar was highly resistant to nearly all prevalent races and became widely popular in the region.

Stripe Rust Becomes A Major Disease

Stripe rust was considered a relatively minor disease until a major outbreak in 1959-61. The variety, Omar, had become widely grown especially in early fall plantings. Although it was partially resistant, the rust had ample opportunity to spread from summer infections of grasses, etc., in the irrigated areas to the major producing areas. Obviously, a more virulent race appeared and Omar became very severely damaged, and therefore was rapidly replaced by more resistant varieties.

The rust problem was enhanced by the widespread increase of irrigation and which provides ample opportunities for the rust to over-summer and to spread to early fall-sown wheat.

Semidwarf Wheats Increase Production Capability and Problems

The need for drastically shorter and more lodging resisting winter wheats had become apparent after growers began planting winter wheat early and applying unusually heavy amounts of nitrogen fertilizers. Often accompanying the resultant unusually high grain yields was severely lodged grain. Varieties such as Omar and Brevor, which were considered to be highly resistant to lodging when released, often became severely lodged when managed for the new levels of production.

Being aware of our lodging problems, B. B. Bayles sent a collection of semidwarf wheats for preliminary observations at Pullman in 1949. From these, Norin 10 was selected to be crossed with Brevor which at that time Brevor was considered to be the most lodging resistant high yielding variety with short straw.

The best segregates from this cross were not suitable for commercial use in Washington, and therefore many of them were crossed with many other varieties and hybrid segregates. A very large proportion of the new crosses produced no segregates

worthy of further use. One selection, however, Norin 10 x Brevor, Selection 14, was among those showing encouraging agronomic performances. Its greatest value, however, was as a parent which contributed not only short, lodging resistant straw, but a greatly increased yield capability to breeding programs throughout the world. Norin 10 appeared to be susceptible to every important plant disease in the Pacific Northwest.

The first semidwarf winter wheat suitable for commercial production was "Gaines," a soft white developed in Washington and released in 1961. It soon became the dominant variety with yields above 100 bushels being common under both dryland farming and irrigation. Its high resistance to lodging, shattering and all prevalent races of bunt encouraged a widespread planting under irrigation, earlier planting in the fall for better control of soil erosion, and greatly increased use of commercial fertilizers. However, it created new problems and intensified others.

Some members of the milling industry voiced disapproval of Gaines, because it did not mill any easier than Brevor. Consequently, a sister selection of Gaines, named Nugaines was released in 1965 because it milled notably faster and was more resistant to stripe rust. After its approval for release, breeders were informed that the milling industry had adopted measures to permit milling of wheats comparable with Gaines and that they were resigned to accepting similar wheats. Nugaines largely replaced Gaines, primarily because it was the less severely injured by stripe rust.

Subsequently, scientists have been focussing on breeding for high-yielding bread wheats; wheats resistant to diseases such as leaf rust, Fusarium root rot and flag smut; and hybrid wheats. These team efforts are made possible not only by state and federal funding, but also by wheat grower and other organizations that contribute millions of dollars, as well as many individual growers who donate free use of their land for experimental tests.



—Rollin Howell Collection, Washington State University,
Manuscripts, Archives, and Special Collections

Steam threshing rig in the Palouse in the early 1900s.

Farm Life In The Palouse

The following articles have been condensed from several hundred pages of detailed research conducted by the University of Idaho Museum, Department of Sociology/Anthropology, as part of a project to establish an open-air living farm museum somewhere in the Palouse. Portions of the research were funded by the Association for the Humanities in Idaho. Dr. Dixie Ehrenreich is the project director. As conceived, this museum would on completion include a settler's dwelling of the 1880s, a working horse farm of about 1915, a crossroads town of the 1930s, and finally the use of historic barns to exhibit agricultural machinery used from 1880 to the present. Originally, the museum was planned for construction on University of Idaho land, in cooperation with the University, but a problem of land availability stymied this effort. At present The Friends of The Farm, an organization of Whitman and Latah County residents, is consulting with the Whitman County Fair Board about moving the project to the Fairgrounds in Colfax. These four articles then provide Whitman County residents an introduction to the periods of the living farm museum that may become a part of their community. The articles concern quite specific areas of Palouse Hills' farm life in the period 1890-1915 and represent four central, interrelated pieces of a larger design. Care was taken to maintain the integrity of each part of the quartet, and the subjects and their sequence of presentation provide the narrative thread connecting them. The subjects are typology and architecture of the farmstead, containing the results of original field research; a sketch of life in the farmhouse featuring the woman of the house; and clothing styles of the period (and their pre-inflation prices). The articles have been condensed and edited by Jack Carter of the University of Idaho Museum staff.

Farmstead Architecture, 1890-1915

by Marvin Moore

The typical Palouse Hills farmhouse of 1890-1915 was dominated by the kitchen (the center of family life), grew in size as the family did, had gable ornamentation, and was most often painted white with green trim or yellow ochre with dark brown trim. As the agricultural economy took firm roots the farmstead attained a sense of permanence. Typically it included a disconnected farmhouse, outhouse, barn, chicken coop and brooder house, pig pen, smoke house, root cellar, wood shed, and possibly a tool shed or repair shop.

In a study sample consisting of 55 farmsites in Whitman County and in Latah and Nez Perce counties in Idaho, the farmhouse was always oriented toward the road or driveway, while the other buildings were roughly centered on the farmyard. The farmhouse usually was on elevated ground for good drainage, but below the crest of a hill to avoid wind. Barns were the furthest outbuildings from the farmhouse. For convenience, outhouses, root cellars, and wood sheds were quite close to the house; with the hen house nearest since poultry was usually taken care of by the farm wife.



—Paul T. Bockmier Collection, Whitman County Historical Society

A typical example of local farmstead architecture at the turn of the century. This is the George West home near Palouse around 1905.

The T-shaped farmhouse floor plan was the most common, found in 28 of the 55 sites surveyed. On the vertical of the T was the kitchen and pantry, while a parlor and a bedroom occupied the horizontal portion. Usually the parlor was in front toward the road and somewhat larger than the bedroom. Three bedrooms were found in houses with full second floors; often these rooms were added on as children were born into the family. The L-shaped floor plan accounted for 12 of the 55 houses surveyed, eight were of small square shape, and seven were of unconventional design.

Palouse farmhouses built in this period were generally wood frame, sided with horizontal shiplap and roofed with wood shingles. Foundations most commonly were stone and mortar. Windows were sash types and were either two panes over two, or one pane over one. Both outside and inside doors were paneled, but outside doors usually had windows in the top half. Roofs were simple gable on the T and L shapes, but peaked on the small square shaped. Porches were present on all three types.

External ornamentation was common and found on porches and at the peaks of gables. Both exterior and interior windows and doorways were bordered by a trim and crowned by a cornice moulding. A siding moulding on the outside was always present at corners of the buildings. While a majority of farmhouse exteriors were painted white or yellow ochre, on the inside the trim and wainscoting were finished with a clear varnish, and the walls were papered or painted.

Water for cooking and washing had to be carried in from a pump located near the back door, and toilet facilities were in the outhouse. Electricity had not yet reached many rural areas of the Palouse, so refrigeration of food was accomplished by use of a root cellar and lighting was most frequently by kerosene lamp. Wood burning stoves were used for cooking and heating.

The “western barn” was the most common in the Palouse Hills in the period 1890-1915. It had a simple gable roof with a pointed hay hood. This combination was

found in 10 of the 35 barns surveyed. Due to the demands of large horse and/or mule teams and the need for inside storage of feed, Palouse barns were larger than those found in most other sections of the United States. All barns were of wood; 18 in the survey were board and batten while 13 were shiplap. In the majority, the foundation consisted only of large boulders which directly supported the sill plate. Construction had to be open frame to accommodate the hay fork. Hay was stored in the center of the barn and feed to stock housed in stalls along the sides. Ventilation was provided by a cupola on top, windows along the sides, and a screened top portion of the main barn door. Barn red was by far the most common color, and many were trimmed in white.

Outbuildings were generally of simple gable construction. However, pig and chicken houses were either a simple gable, a shed, or an Idaho Half Monitor. Both were sited to facilitate drainage and below hill crests to avoid the wind.

The field survey was complicated by the fact that few of the 1915 farmsites in the three counties are intact today; only six of the 55 sites had all buildings standing. Many of the more flimsily constructed outbuildings, such as the wood shed or outhouse, have long since deteriorated or vanished. The smaller farms of the turn of the century have been bought up and consolidated into large acreages, in keeping with the national trend. Consequently, one farmer may own several of the early homesteads, and would have little interest in preserving these buildings. And many of the outbuildings that have survived often have been moved, remodeled, or adopted to uses foreign to their original purpose.

The sites surveyed and the family name associated with them include the following. Whitman County, Washington: Colfax—P. Aeschliman, L. Aeschliman, Hickman, Jones and Miller; Palouse—G. Hill and R. Hill; Steptoe—Brooks, Durham, Follis, Schauder, and Sharp; Uniontown—Brenner, Jutte, and Jacobs.

Latah County, Idaho: Big Bear Ridge—Atwater, Burke, Drury, Fairfield, Hecht, Huffman, Ingle, McNeeley, Moore, Wright, unknown (presently Sneve); Deary—La Bolle, unknown (presently Leslie); Freeze—Wolhete, Genesee—Borgan, Gehreke, Holmes, Isacson, Lorang, Meckling, Rosenau, Scharnhorst, Schluter, Springer, Tierney, unknown; Moscow—Allen, Carico, Collins/Fleener, Gamble, Johnson, Phelps and Wheeler; and Viola—Potter, unknown (presently Keys).

Nez Perce County, Idaho: Genesee—Evans, Baumgartner, Herfelt, Iman, and Jutte.

The Farm Wife And Her Domain **by Jack Carter**

“It was the only thing they (pioneer farm women) had really, was their house. They took quite a pride in their house.” That assessment by John Wahl, a Palouse country native who remembers his mother’s example of physical and emotional commitment to managing a household, may explain the motivation that kept her going. For the farm housewife’s work load was immense, by modern standards, and it was in her house that she could show off the evidence of the family’s progress up the economic scale from survival to affluence.

Wahl made the comment to Mary Ann Davis, in the course of her research for the University of Idaho Farm Museum, and it was typical of what she learned about the Palouse Hills of the 1890-1915 period. Davis’s report, on household goods, and a second paper on the duties of a Palouse farm wife, written by Ann Brookhyser, focus on the pioneer farm woman and her domain—which had its headquarters in the kitchen.

Davis wrote that “in the capacity of a multi-use building, the farm house served as a storage container, a workshop for cooking, cleaning, and bathing; a place for nourish-

ment, entertainment, and relaxation.” Heated by wood burning stoves and lighted by oil lamps, the house was the center of everyday non-farming activity and of all the rooms, the kitchen proved to be the center of family life.

As Brookhyser noted: “The wife did all the cooking. Often she would be up by 5:30 in the morning to start cooking. She would have to cook three meals a day and they had to be especially substantial if it was during harvesting. She was always the first one up and the last one to go to bed. There was always something for her to do.”

A major portion of the day was spent dealing with food in one way or another. Prior to World War I, Palouse farms were basically self-sufficient. Gardens provided vegetables to be served, preserved, or made into other foods, such as cabbage into sauerkraut and cucumbers into pickles. Fruit was stored or made into preserves, and jellies and applebutter were made from apples. Farm animals provided the family with milk, cream, butter, lard, eggs, and meat. White flour, sugar and coffee were purchased or bartered at local markets. When a woman ran out of flour, she might go to the barn to collect “shorts” used to feed the cows and make bread from this. Women learned to adapt their recipes, such as making fruitbread without eggs because the hens were not laying.

Cooking was an all-day affair, beginning with a large breakfast. As the cookstove heated, water was brought from the pump, and the coffee was put on to boil; the farmer and the children were milking cows, loading the woodbox, and caring for the work animals. Breakfast consisted of eggs, bacon or ham, potatoes, toast or hotcakes, mush, and coffee. Once the dishes were washed, the wife began preparations for dinner, the main meal of the day, as substantial as breakfast but with pies, cakes, or cookies for dessert. After the afternoon’s work, supper was served. It included meat, potatoes, and bread for staples. While continually preparing three meals, women also cleaned, churned butter, washed and ironed clothes at least once a week.

Brookhyser described the tedium of laundry day at one Palouse farm. “. . . The clothes were sorted. Soap was dissolved . . . and the clothes were put into the washer and the cover put on the agitator. The washer had a wooden handle which was pushed back and forth for 10 minutes. The clothes were put through a wringer, then sorted again for bleaching; clothes had to be boiled to be bleached. Everything was washed again, with attention to grimy spots, and put through the wringer. Then the washer was emptied and filled with hot water for rinsing, and bluing was added. The rinsed clothes were put through the wringer again, and hung on the clothesline. In keeping with the practice of not wasting anything, the leftover water was used to scrub the outhouse. Ironing was done with flatirons, heated on the stove.”

The routine of cooking was intensified for holidays, when guests were coming, and during harvest when a full crew of workers was added to the farm operation. Several farm wives interviewed by Davis remembered that these occasions required extra food for preparation several days in advance.

The basic cookstove, easily the dominant artifact in the kitchen, made the room warm and comfortable in winter but a place to avoid on hot summer days. It was used for cooking, baking, keeping food warm, and for heating water in the reservoir on the side. The tea kettle occupied a constant spot at the back of the stove, always hot. Food cooked on top of the stove was started at the front, then moved back to finish cooking. The fire and heat was regulated by vents, and gauged by the type and amount of wood used.

It was possible to purchase a Merit Steel Range for as little as \$20 in Pullman in 1901. The Sears, Roebuck and Co., catalog in 1900 offered variously equipped Acme



—Paul T. Bockmier Collection, Whitman County Historical Society
The dining room of a rural Palouse home, around 1910.

stoves from \$18.70 to \$431.05. By 1915, Simon Driefus of Colfax charged \$62 to \$75 for his line of South Bend Malleable ranges.

The kitchen work table was used for washing dishes, chopping vegetables, rolling out pie dough, and numerous other tasks. Sometimes homemade, it was fashioned usually of oak or pine. There was also the “Kitchen Cabinet” variety table; rectangular with two drawers below, and below that two bins for the storage of sugar and flour.

The family ate at a table, commonly an extension table located in the kitchen away from the stove. Generally rectangular but sometimes round, tables were made of oak or pine, and were painted or stained. Kitchen benches were often homemade and used by large families. There were two types of chairs, those with pressed backs and the common bent wood chairs. Around the turn of the century, the “factory chair,” mass produced in the East, began to find its way into Palouse kitchens.

Storage for food, dishes, and other utensils required cupboards, cabinets, and the pantry if there was one. Some kitchens were equipped with built-in cupboards, but standing cupboards and cabinets were more common. Thelma Miller, a Colfax resident, recalled that the “Kitchen Queen Cabinet” and the Hoosier Cabinet, both used in the Palouse, contained storage bins and a built-in flour sifter.

Brookhyser found in her study that there was little “sharing of jobs” between the farmer and his wife. “She took care of all the inside work and he took care of the outside work . . . a division of labor that was very rigid.” They were a team. “One could not survive without the other, and because of this there was a strict division of labor.” This division extended to the children. “The boys worked on the farm and the girls worked in the home with mothers,” Brookhyser wrote. “The children were loved, but they were thought of as a free labor force. Boys were especially valued because they could work on the farm.”

Brookhyser related a story which illustrates that if women gave the appearance of being dominated by their farm husbands, it was really only an illusion, one in which they didn't mind sharing. Two Palouse farm women were having tea when the hostesses' husband came stomping in and told the women what he thought about the President, the Congress, and affairs in general. He finished by declaring, "I am the head of this household, and my wife knows it." He stomped out. His wife told her companion, "Yes, he is the head of this house and I know it, but I'm the neck that turns the head and he doesn't know it."

There was little time for tea drinking, however. The farm wife would plant and harvest a garden, and preserve its bounty. If she had time, flowers were planted around the farmyard. When beef and hogs were butchered, she took charge of preserving the meat, making head cheese and soap, and rendering lard. She churned butter weekly, cared for the chickens, cleaned the house, sewed for her children, and served as the family doctor.

Clothing In The Palouse, Circa 1910

by Susan Lehman and Dixie Ehrenreich

By 1890 the class distinctions in clothing in America had become less apparent, a trend that was generally reflected in the Palouse country. To be sure, work clothing set farmers and laborers apart, but away from the job, on Sundays and other occasions, the clothing styles of all classes were remarkably similar. By 1919 the techniques of mass production and mass marketing were being applied to clothing, especially for men, and almost every man could afford a suit.

Another societal trend of the period that affected clothing style was that women were becoming more independent. They were moving into the working world, and also engaging in more active leisure pursuits such as sports. This had its effect on fashion, which began to emphasize increased freedom of movement and simplicity in attire.

In 1880, less than half of the men's clothing in the United States was purchased as ready to wear, but by the early years of the Twentieth century estimates are that nine-tenths of the men and boys were wearing ready made clothing. The expansion of the railroads, the rise of the catalog sales stores of Montgomery Ward and Sears, Roebuck and Company, and the creation of Rural Free Delivery mail brought Palouse farmers closer to the mainstream of American life.

By 1910, dress or Sunday clothing of Palouse farmers differed little from that of their city cousins. Even in the 1890s most men had at least one suit. The trusty blue serge arrived in the Nineties and dominated men's fashions for years. They were generally three-button single or double breasted—called sack suits because of their loose fit. Pants were pegged, narrower at the cuff than the thigh; made with sidepockets, hip pockets, usually a watch pocket, suspender buttons, and no cuffs.

Dress shirts were generally of white muslin, often with a finer cambric bosom. Pleated shirt fronts were fashionable in the early 1900s. Usually of linen, they were made with a neckband and then worn with detachable collars and cuffs. Cuffs were about four inches wide and, of course, required links. Also in this period the one-piece union suit was giving way to separate undershirt and drawers which composed long underwear. Men's hose was made of black cotton, lisle, or silk and required garters. Shoes might be high tops that laced or buttoned, or the more fashionable oxford.

Harry Sampson of Moscow, a clothing salesman at David's, remembers that hats sold to farmers had several different styles, "so we just named that style hat after the farmer that wore 'em, the first fella that started it . . . One was Crow and the other was Snow. It was fairly high top and they put two dents in 'em, two in the front and two in back, or sometimes just two in front, but they were pretty good size hats, they weren't dinky hats at all."

The durability of heavy denim made it the dominant fabric for work clothes. Farmers generally preferred overalls or loose fitting denim pants for coolness in the summer, and did not need the more closely fitted pants unless they spent long hours on horseback (a loose pant is more apt to chafe the legs). An interesting feature of overalls worn in the Palouse was the addition of an extra layer of reinforcing denim on the front, covering the thighs and up to the waist. This was usually added by the homemaker, but the 1908 Sears catalog advertised double front overalls, claiming that when the first layer wore out it only need be cut off to produce an ordinary pair of overalls. This reinforcing was needed to meet the demands of heavy farm work, such as loading bales of hay or lifting grain sacks. Sometimes crews wore leather or heavy fabric aprons and leather cuffs to protect their clothes. An analysis of period photographs of harvest crews shows that overalls were favored over pants by about two to one.

Work shirts were usually blue chambray. "I'm amazed at the price of chambray work shirts . . . today . . . I sold hundreds and hundreds at 39 cents apiece," said Harry Sampson of prices in 1910. Other shirt fabrics and colors available included black sateen, tan chambray, and striped cotton twill. By this period men's shirts were seldom homemade except in the poorest families. Shirts were long sleeved and the sleeves worn down even in summer, to protect the skin from the sun.

For winter coats the farmers generally wore wool mackinaws, often in bright plaids. Work boots were leather, worn above the ankle and laced. High top rubber overshoes were common winter wear. Work hats were needed for protection from the elements and included a wide variety of styles, perhaps outmoded dress hats, as seen in photographs. Stetsons were available at area stores, but the Western "ten gallon" hat does not show up in photographs. In winter heavy corduroy or wool caps in jersey or melton cloth with earmuffs were worn. Sealskin caps were also available.

Almost every woman of the period had at least one good dress for Sunday and other important occasions like weddings and funerals. These were generally made at home, although many women employed dressmakers; McConnell-Maguire, the principal department store in Moscow before 1893, employed at least 20 seamstresses. This "best dress" was often of black silk, though more affluent women might also have patterned silk. Fine wools were also common.

The styles were in keeping with the general fashions of the period: the tubular skirt, fitted over the hips and flared at the bottom, often of gored construction; small waist, enhanced by the so-called "Pourter pigeon style" bodice which created a large bosomed effect by the use of extra fullness gathered at the bodice front. High necklines were still popular and long or three-quarter sleeves were common with a moderate amount of fullness at the top. Women's suits were also coming into fashion; serge for winter, linen for summer. Regional advertisements in 1908 priced suits from \$9.50 to \$25.

The straight-fronted corset was the predominant style in this undergarment after 1900. It began slightly lower than in the Nineties, giving a medium-high bustline, the waist was small, and the fullness of the hips was still emphasized. The corset cover, a



EXTRA SPECIAL OFFER
 Regular \$1.50 **95¢**
 Corset for - -

WE SPECIALLY RECOMMEND THIS CORSET AS ONE TO GIVE ABSOLUTE SATISFACTION, BOTH IN FIT AND QUALITY.

No. 13K143 This corset is made in the very popular long hip medium high bust effect and will fit the average figure. Made of the best quality of French coutil, acknowledged by all to be the best wearing corset material. It is fitted with non-rustible stays and aluminum eyelets. The front clasp of the corset is 11 inches long with five hooks and nickel plated skirt fastener. Four hose supporters of the best lisle elastic are attached to the front and sides. Corset is lined with 2-inch wide valenciennes lace drawn with satin ribbon. We absolutely guarantee this corset to be equal to any \$1.50 garment on the market. The wearing quality of this corset is a particular feature, and if it is once used, we know that we will receive many re-orders in the future. Sizes, 18 to 30. Be sure to give size. **95¢**

If you prefer extra 17 to 21 only.

—From the 1908 Sears, Roebuck & Co. Catalog.

sleeveless scoop-necked garment buttoning down the front, was made of cambric, muslin, or other fine cotton and trimmed elaborately with lace insertions and ribbons. The back and front seams of drawers were left open and tied or buttoned at the waist. They were made of fine muslin, nainsook, cambric and usually trimmed with ruffles, embroidery and/or lace. Over these went underskirts or petticoats. Black silk stockings completed the undergarments, although the less affluent substituted black cotton with a silk finish. In summer, white silk or lisle stockings were worn. Both pumps and high-top buttoned boots with Cuban heels are found in newspaper advertisements of the period.

Long man-tailored coats of wool serge or broadcloth were favored by women for outerwear. They were cut in both double and single breasted. Summer dresses generally were of fine cottons such as lawn or batiste, or of linen. These were usually elaborately worked with tucking, ruffles, embroidery, or lace insertions. Hat fashions available from Sears included large turbans, shepherdess style, mushroom style, sailor and leghorn—all with a variety of elaborate trims. Hats in local advertisements appear to be primarily the leghorn style.

Work dress for farm women was quite simple, consisting of a gored skirt and shirt-waist or perhaps the simpler one-piece Mother Hubbard. As Lola Clyde of Moscow remembered, “Oh, a Mother Hubbard is gathered across the top, and gathered to a yoke and long-sleeved, so that you could push them up to wash and then with a skirt down to your ankles.” Shirtwaists were fairly simple, with long sleeves that easily rolled up to three-quarter sleeves; and not elaborately trimmed, as they merely added more work on ironing day. Skirts varied from five to 12 gores and were usually of dark wool for winter or cotton “wash goods” for summer. They sometimes had flounces or dust ruffles, but these might have been more than everyday work clothes.

The choice of color was dictated more by practicality than fashion since dark colors showed the dirt less easily and therefore needed less frequent washing. The shirt-waist and skirt was a practical as well as fashionable costume for farm women. Blouses were easily changed when soiled and a fresh one could be put on quickly if need be. Through skirts and waists were frequently advertised in local store ads, those interviewed maintain that farm women made virtually all their own work clothes.

An apron was worn over the skirt for the practical reason that it was easier to wash, and skirts could last longer between washings. Many women kept a clean apron hanging in the kitchen always ready for unexpected visitors. Aprons were generally long, sometimes with a bib to cover the blouse, and usually made of any available material. Colorful checked gingham was a favorite, but old dresses or skirts might also be used. Some women embellished aprons with needlework.

Some women wore corsets even when doing heavy housework. Apparently many of them had become so accustomed to corsets that they were more uncomfortable without the support they gave. Many farm women, however, dispensed with corsets around home and wore lightweight summer union suits of cotton, or perhaps separate vests and drawers. In winter they wore union suits or flannel underwear and flannel petticoats. One or two cotton petticoats, and drawers, were worn in summer. Stockings were heavy black cotton in summer, wool in winter.

Petticoats, drawers and corset covers may have been made at home. They were not difficult to make and could be embellished as desired. However, ready-made undergarments were readily available both locally and through the catalogs. Sears listed corset covers at 18 to 98 cents, and drawers from 25 cents to \$1.10.

Young boys' clothes were usually homemade, overalls and shirts being the primary mode of dress around home. Carl Olson, a long time Palouse resident, said, "my mother made the clothes on a sewing machine—pants, shirts, everything. She would buy shirt cloth for 15 cents a yard and overall material for about 25 cents. She could sew a pair of pants for two bits."

For dress and sometimes school, boys under about age 8 wore wash suits made of easily laundered fabrics such as chambray, linen, galatea cloth, a heavy cotton, or duck. Pants were out "bloomer" style—quite baggy with elastic at the bottom—and reached just below the knee. Jackets and blouses were most often sailor style, although double or single breasted coat styles with or without sailor collars were also available. These were worn with shirts.

The norm for casual wear included cotton waists, shirts, and bib overalls, with black stockings and high top shoes. In the summer boys went barefoot. Underwear was usually purchased in the fall: "Two suits . . . for everybody," noted Elsie Nelson of Moscow.

Older boys wore all wool serge suits in winter, knickers or knee pants for the younger ones and long pants for the older. Jackets might be double or single breasted. Boys suits could be purchased for \$3.50 to \$6 in 1908. They were worn with shirts similar to men's styles, though less frequently with stand-up collars. For everyday wear, turn-down soft collars and perhaps a four-in-hand tie were in order.

Young girls apparently were dressed as simply or elaborately as their mother's time, skill at sewing, inclination and finances permitted. As Lola Clyde recalled, "Any woman worth her salt could sit down and whip up a little dress for the children before breakfast almost . . . and lots of times with lots of braid on 'em and some of 'em had hand crocheting . . ." Almost all of their clothing was made at home except some underwear, stockings, shoes and coats.

Young girls usually wore cotton vests and pantalets or drawers of muslin and cambric like their mothers. In the winter they wore long wool underwear. Black stockings were standard, though white lisle was occasionally worn for dressy occasions in the summer. Nightgowns were generally simple and of fine muslin or bleached sugar sacks.

Four girls aged 4 to 10, the sailor suit was quite popular. Another favorite was the suspender dress, which consisted of a skirt that could be varied as the maker chose, generally pleated, and straps reaching from front to back over the shoulders. This was worn with a separate guimpe, a short blouse with sleeves to be worn with a jumper. In the 10 to 12 age group the guimpe dress was considered appropriate. It was a one-piece dress, belted, and often had cape sleeves and box pleated skirts coming below the knee. This was worn with a separate guimpe which might be trimmed with tucks and embroidery. Older girls dressed in shirtwaist dresses or waists and skirts like their mothers.

Girls' winter coats were generally nearly as long as their dresses, double breasted, with turned back cuffs and unlined. They generally wore high-top shoes, buttoned or laced, but white pumps were seen for summer wear. Hats were modified versions of their mothers' although straw sailor hats also were seen.

Despite the finding in this research, the Palouse farm women of 1890-1915 were considerably more fashionable and fashion conscious than one might expect, there were practical considerations that tempered these impulses. Perhaps the ever-present dirt was a primary consideration. Thus, dark clothes predominated. Simplicity of design is another factor noted. Elaborate patterns and styles were known and available from magazines, paper patterns, newspapers; but the press of other work and the time consuming process of heating irons, made ironing too many ruffles and frills a luxury.

Additionally, the hard wear that clothing was subjected to influenced style and fabric selection. Dainty cotton and silks might do for best clothes, but everyday hard work required sturdy fabrics like denim or broadcloth—materials that could be patched.

What stands out in light of this research is the tremendous variety of clothes worn by Palouse area residents around the turn of the century. With the constraints of the general styles of the time, the people expressed their individuality in any number of ways through their clothing. For the women, especially, the making and decorating of clothing for themselves and their children provided a creative outlet, and one which they used with great skill and talent.

SOURCES

Major background sources for the series of articles on Palouse farm family life in earlier times are listed below. Complete bibliographies are on file at the University of Idaho Farm Museum office in Moscow, available for inspection by those who wish to engage in further study.

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The Working Farmer's Inventions: The Potato Planter and Smut Killer Peter Haupt Built

by Mark Doerr and Lambert Haupt

Like many early settlers in the area, Peter Haupt had a varied career. He tried managing and owning small businesses as well as farming. Peter was 15 when he came to Spokane from Minnesota in 1883 with his two older brothers. He married Anna Schoenberg in 1892. Unable to find work in Spokane during those depression years, he and Anna moved to Pendleton where Peter operated a saloon. The Haupts soon moved to Uniontown, Washington where Peter worked a farm part time and also installed water mains for the town of Colton. Around 1903 the Haupts became proprietors of the Uniontown Hotel and Saloon. They had six children by that time.

In 1912 Peter leased the Bohle ranch near Colton and went into farming full time. Later the family moved to the Fitzgerald farm, also near Colton. The lease was not renewed in 1924 so they moved back to Colton. Peter, with his daughter Frances, and son Lambert, bought the Burkett-Morning General Store, named it Haupt's Supply and went into the food store business. They expanded the store and eventually opened a meat and grocery store in Grangeville, Idaho called Haupt's Table Supply. Peter's son Lambert managed the Grangeville store and another son, Bill, managed the Colton store. The family sold both stores in 1945 and Peter retired to doing chores and playing cards. His wife Anna died in 1951 and he followed her in 1955. Of their ten children, three still live in the Inland Empire—Helen, Mrs. Vincent Meyer, in Colton; Bernadine, Mrs. Willis Hordeman, in Moscow; and Lambert, with his wife Alverna, in Spokane.

Even when Peter Haupt was a saloon owner in Colton, Washington in 1911 he had plans to farm. Part of that plan was to overcome the smut disease that killed seed wheat.

The soot-like smut fungus that can grow on and destroy wheat, corn, and barley is dusted on the outside of seeds when the crop is threshed. When those same seeds were sown the smut spores would sprout and infect the young seedlings. The result was a poor quality crop; a crop with a reduced value at the market and a crop loaded with the viscous smut ready to infect the next crop. Peter Haupt, the tavern owner, envisioned a machine to rid the seed of the dangerous smut dust.

The opportunity came to put his ideas to work when Haupt and his wife, Anna, leased a ranch four miles west of Colton. They moved onto the Martin and Carl Bohle ranch in the spring of 1912 and Haupt wasted no time in going to work on his machine.

The usual method to try and rid the seeds of smut was to soak the seeds in a blue-stone solution. A partially filled sack of wheat was dunked in a barrel of the solution, then the grain was stirred in the open sack with a stick. This method lacked a consistent way of getting enough of the solution to all the grain. Some grain got soaked and died; some got so little contact with the solution that the smut was not eliminated.

Haupt's idea was to build a machine capable of giving all the grain even contact with the solution and separate the smut from the grain.

Since not even a similar machine existed, Haupt had to invent his smut killing machine from the ground up. Vitriol, or liquified bluestone, deteriorates most materials it comes in contact with. The exceptions were copper, wood and glass. In that day glass was hardly a useful material in a machine to be subjected to the rigors of farm use so the obvious choice of materials were copper and wood.

The grain had to be kept moving in an even flow and at the same time had to be soaked in vitriol. Haupt devised a bin with a hopper at one end and an elevator with perforated copper scoops to lift the grain out of the bin, drain it, and dump it into the sacker. To keep the grain moving from the hopper to the elevator, Haupt built an auger inside the bin. It was like a giant screw, copper threads around a wood core. The auger turned in unison with the action of the perforated cups on the elevator. As the grain moved through the vitriol the smut separated from the wheat and rose to the top where it was scooped off. Because there was consistent movement and the grain did not stay in the vitriol too long the wheat grain came out clean of smut and healthy.

Haupt hand built his machine and when it was completed it performed as he had predicted. The smut free grain was sacked and left on the machine's platforms to dry.

Peter Haupt did not consider himself an inventor. He was a farmer and he planned to grow a lot of potatoes. He decided the current method of potato planting was no way to grow the number of potatoes Peter Haupt wanted to grow.

The potato planting technique of the day was to plow a furrow, drop the potato seed in the furrow and cover it with another furrow. Another method was to use a hand shovel to lift a slice of dirt, drop the seed into the hole and drop the dirt back onto the seed (which was actually a hunk of potato with the eye left in it). Either method was slow and tedious.

Part of being a farmer in those days was being a good scrounger. Using the time-honored technique of early-day recycling, Haupt cut an old wagon in half and used the front chassis to build his potato planter. He made the half-wagon rigid by building a platform over the axle, centered between the huge wagon wheels. This reinforced the center weakness that resulted from cutting the rig in two.

The axle itself was transformed into a kind of reverse universal gear that turned a disk that had been inserted into the platform over the axle. The disk looked like a sliced wooden pie with slots for the potato seeds to fall through, precisely positioned so they would fall into the furrow. Behind the potato planter cart was a chain slung from the rear right side of the wagon to the rear left side so that the bulk of the chain drug in a loop behind the planter. The chain drug the furrow dirt over the seed and the job of potato planting was quickly and efficiently done.

Peter Haupt was an inventor of necessity as he saw necessity: a better and faster way to get a job done. Friends advised him to patent his machines, but Haupt ignored the suggestions. The machines were tools to get a job done and that was Haupt's simple goal.

Peter and Anna Haupt finally left the Bohle ranch in 1924 after they lost the lease on the place. Peter Haupt went into the general store business and his inventions were auctioned off.

Today the smut fungi is battled with chemicals sprayed from airplanes and by modern methods of crop rotation. Today's potato planters are powered by internal combustion engines and Haupt's horse drawn potato planter is a distant relic of the

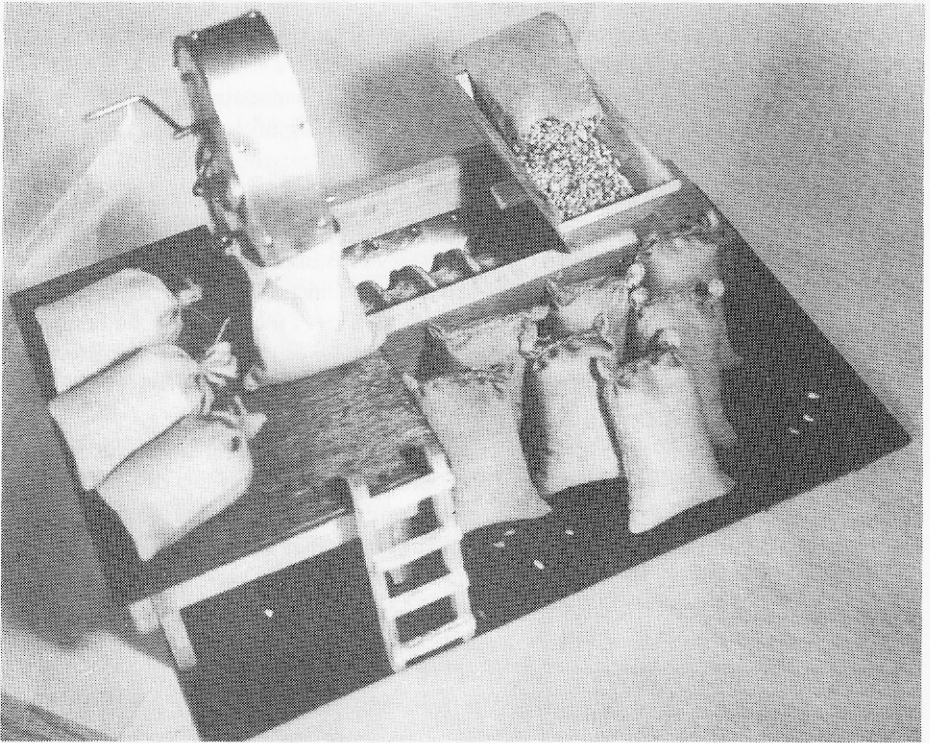
past. Reports filtered back to the Haupt family that Peter Haupt's potato planter was seen many years later still in working condition on the Camas prairie.

Keeping alive the memory of those machines might have been impossible if not for the sharp eye for detail of Peter Haupt's son Lambert. Lambert worked both machines during many long summers of his youth. He was fascinated with his father's inventions and the appeal of the machines and Lambert's vivid memory has resulted in the son virtually re-inventing models of his father's machines.

The Haupt inventiveness appears to be alive and well in the obvious understanding of the working of machines and the need for them apparent in Lambert Haupt's models.

As his father hand-built the parts for his inventions Lambert Haupt hand-built each intricate working part in his models. Close-up photographs might even fool some into thinking they were viewing pictures of the actual machines. The parts on the models move and work much in the same way the original machines' wheels and augers and cranks operated.

Lambert Haupt worked with the real machines throughout his teens. He was 74 years old when he reproduced the models of those same machines.



A replica of the smut killing machine and grain sacker invented by Peter Haupt about 1911. This working model was built by his son, Lambert Haupt, from memory in 1979.

Palouse Farming on Film: The W.S.U. Collection

by Gale J. Franko

The birth of motion picture photography preceded Washington State University's inception in 1890 by less than ten years. As one of the pioneering institutions of higher education to utilize this new medium, W.S.U. established a small film library to circulate educational films as early as 1920. Now, over 40 years later this collection comprises over 3,500 different titles.

It has been common practice in educational film libraries to withdraw out-of-date items in order to maintain a timely collection. Over the years, W.S.U.'s Instructional Media Services has had to withdraw over 1,450 such films, but unlike most film libraries throughout the country, did not destroy these films. Those that were deemed to have historical importance were preserved and they represent visual events as far back as 1915.

One area of special interest in this collection of historical documents has proven to be agricultural films made in Whitman County. Perhaps the most significant of these films is the *Leonard Young Horse-Drawn Combine* film. Professor Young, who retired from the W.S.U. College of Agriculture in 1968, made this impressive 16mm color film on the Harold Brewer farm in 1936 (coincidentally the same year that Pare Lorenz made his universally acclaimed agricultural documentary *The Plow That Broke The Plains*). Young had heard that the Brewer farm was still harvesting with horse-drawn combines and that this phenomenon would soon be a thing of the past, so he took his 16mm camera out into the field to film combines being drawn by a team of 16 horses.

The ingenuity of area farmers is readily displayed in another W.S.U. film depicting the Mayview tram. This tram was a clever invention by area farmers to transport their sacks of grain down the steep hills from their fields to the Snake River for loading onto barges. Through a careful system of counterbalanced flat cars the loaded car would descend to the loading crew waiting at the bottom of the hill while an empty car would be drawn back up the hill on the same track. The two approaching cars would meet at a strategically placed section of track that would allow them to pass each other safely and then rejoin the main section of track.

Still another film of note depicting Whitman County agriculture is the Druffel family film. Actually several sections of film shot at different periods of time ranging from the 1930s into the 1950s, the Druffel family movie contains scenes of both tractor-drawn combines and horse propelled combines; that is, a combine which is actually pushed by a team of six horses. The "pushbinder" is seen harvesting on the Druffel family land near Colton. Additional scenes are also included of a steam threshing bee and the Pioneer Day picnic in Colton.

Surely the most significant collection of Whitman County visual history is represented by the recent deposit of the film collection of Mr. C. E. Graves, a photographer in Pullman from 1915 to 1948. The Graves collection of motion pictures is made up of over 68 reels of both 16mm and 35mm film. The Graves films cover the years 1927 through 1942 and demonstrate some unique aspects of Whitman County history. For example, one of these films features tractor-drawn combine operations in the Palouse wheat fields that is clearly reminiscent of similar scenes in *The Plow That Broke The Plains*—a slow pan across a wheat field during harvest where first one combine goes by, then another, a third, fourth, and fifth. The shot was not staged but

reflected the cooperative spirit of several Whitman County farmers working together to bring in their neighbor's harvest.

Graves also filmed a glimpse of the earliest "agriculture awareness" demonstrations. This film does not depict gigantic Steiger, International Harvester, or John Deere combines being driven down Pennsylvania Avenue; but instead, it shows 1930s vintage flatbed trucks loaded with sacks of grain being driven down Main Street in Pullman for what was called "Appreciation Day." The area farmers hung hand-painted banners from their trucks saying such things as, "EAT MORE WHEAT." Several contests were held in Pullman on this "Appreciate Day" and Graves and his camera were there to film the inevitable pie-eating contest, a grain sack sewing contest, a greased pole climb and a town tug-of-war in the middle of Main Street in front of the bank. No doubt a fitting postscript could have been written by Mr. Graves: "And a good time was had by all."

It should be noted that all of the films mentioned in this article were the work of amateur filmmakers and might have mouldered in the family basement if their owners had not recognized their special worth. The W.S.U. Instructional Media Services is encouraging anyone with films that they may feel are noteworthy for historical reasons to contact them about making a videotape of their film. These motion pictures are proving to be visual time capsules by which we can glimpse the past. Through videotape we can hope to extend the life of such time capsules a little longer.

Publications of Note

Buffalo Coat by Carol Brink

Latah County Historical Society, 421 pp., \$9.95

Connoisseurs of local history and those who delight in good fiction can join in thanking the Latah County Historical Society for the recent republication of Carol Ryrie Brink's *Buffalo Coat*. The novel was first published in 1944 and is set in Moscow, Idaho during the years 1888 to 1896. Carol Brink, who was born in Moscow in 1895 and graduated from the University of Idaho in 1917, is perhaps best known as the author of the perennially popular *Caddy Woodlawn*, a work written for a juvenile audience and set in rural Wisconsin in the 1860s. Fans of the *Caddy Woodlawn* stories will find that Brink's straightforward and unaffected narrative style is unchanged in *Buffalo Coat*, but the world it addresses is a mature world filled with adult problems.

There is a long tradition of American novels, beginning more or less with Fenimore Cooper's *The Pioneers*, whose subject is the growth of the frontier town. It has proven an ideal form by which to enliven history and explore the formation of American character. Brink describes Moscow (fictionalized as Opportunity, Idaho) with affection and precision. The settlement begins as an "island in a morass of mud" and grows into a thriving western town with Methodist, Episcopalian, Baptist, and Catholic churches; a railroad depot on West 8th just two blocks from Main Street; a Swedetown, an Italian town, and a shanty town; the Golden West Academy and an Opera House; and a red light district. Fraternal organizations abound (Masons, Shriners, Odd Fellows with their complementary ladies auxiliaries) as do women's clubs devoted to "culture" such as the "exclusive Literary and Uplift Society." And the town is populated by a broad range of ethnic groups: Scandinavians, Italians, Poles, "Bohemians, Chinese, Germans, a Russian or two, and a Greek."

But *Buffalo Coat* is not simply a novel of local color. It is also the story of many people who live, endure, or die in the still young American West. Brink gives us

several memorable major characters: the big-hearted Dr. Hawkins who is devoted to growth and progress and his strong, gentle, and wise wife Anna; the guilt-ridden Dr. Duval, an expatriot Frenchman trying to come to terms with his past; the straightlaced English Methodist Dr. Allerton who discovers passion too late in life; and independent-minded Jenny Walden who does not “follow the prescribed pattern and that is fatal in a small town.” And there is a rich collection of secondary characters, American “grotesques”: Alf Stevens the “queer boy” whose father hanged himself; Mrs. Shanley the divorced woman; the wealthy hypochondriac, Mrs. Kessler; and Dr. Allerton’s timid, plain, and repressed wife Katherine.

Although creatures of the imagination several of these characters had real life models, citizens of a Moscow that is now no more. The Latah County Historical Society edition of *Buffalo Coat* provides us with excellent historical background about these people and their town in the form of a new introduction by the author, a brief catalog of people and places, and several pages of relevant photographs.

—W. F. Wilbert

The Volga Germans: Pioneers of the Northwest

by Richard D. Scheuerman and Clifford Trafzer

University Press of Idaho, 244 pp., \$18.95

The story of the Volga Germans and how they came to the United States and to the Pacific Northwest is poorly understood outside German Russian communities. Although there is a considerable body of material published on this ethnic group, much of it appears in specialized journals or is difficult to locate. In their work Richard Scheuerman and Clifford Trafzer have synthesized this material and combined it with their own detailed research to construct a sound, well-written account that should be considered essential reading by anyone interested in Northwest history.

Their book begins with the migration of nearly 30,000 Germans to Russia in the 1760’s during the reign of Catherine the Great. Considerable attention is paid to the development of the communities these German immigrants established. Scheuerman and Trafzer also focus on the events leading up to the eventual emigration from Russia in the late 1860’s and 1870’s. Here, they discuss the growing dissatisfaction and isolation felt by the Volga Germans in the face of an increasingly hostile and nationalistic Russian government.

Finally, the German Russian pioneering era in the Pacific Northwest is examined in great detail. Histories of major German Russian communities are outlined and placed in the context of the Northwest experience. Scheuerman, a descendent of these pioneers and an expert on German Russian history, has teamed up with Clifford Trafzer, Assistant Professor of History at Washington State University, to produce a first-rate history filled with information, plenty of informative maps, and photographs of everyone from Catherine the Great to Reverend Henry H. Rieke. This book should be of special interest to Whitman county residents because this area was the first into which the Volga Germans moved a century ago. In fact, 1981 is the centennial of their arrival to the county—a fitting occasion for the publication of *The Volga Germans: Pioneers of the Northwest*.

—Fred C. Bohm

The first issue of *The Journal* of the Nez Perce Historical Society is now available and features two articles of significance: “William Craig, Mountain Man and Homesteader” and “River History of Nez Perce County: River Navigation” (the first section of a proposed three-part essay). *The Journal* is a welcome and handsomely produced addition to the growing library of regional history bulletins.