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*A
Half
Century*



with the

Orr Family

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Author's Note

Farm management is as old as agriculture itself for it is the act of operating a farm. However, as a body of organized material suitable for study and discussion in a formal way in colleges, it is one of the newer fields. This body of material includes the experience and procedures of farmers in assembling and combining the ingredients of a farm business—land, labor and capital. It also includes what is learned from observation and records of how those farmers meet changes in circumstances—weather, prices, and scientific and technical advances.

Teachers of farm management recognize that there are two objectives in their teaching assignment. One involves training students to recognize the production factors and the rules which govern the manner in which these factors are combined to give a satisfying farm business setup. The second is practical application of these rules.

The first of these is fairly easy to achieve within the classroom. We can study land, labor, capital, management, and a good deal about what will happen to income as we modify the relation of these factors to one another. Study of the second objective is a little more difficult but seeing what actually happens on the farm as those changes are made is very helpful.

It must be admitted that the farm visit method is not accepted by some farm management teachers. They use a mathematical approach to determine the combination of enterprises that will give the entrepreneur maximum returns from the resources available to him.

There can be no argument about the desirability of achieving a resource combination which maximizes income. The mathematical treatment which is used in seeking to achieve this goal gives the farm operator an exact determination of the results that he can expect under the conditions assumed in the analysis.

However, many teachers of farm management question the assumption that the production factors can be measured accurately. There is no such thing as a standard man equivalent. Land differs widely in productivity. Price relationships are changing constantly. These and many other variables introduce uncertainties in the mathematical approach.

It is because of these uncertainties that many teachers have depended on the historical experience of farmers when teaching students how to identify and develop farming systems. They have worked from records, the experience of the farm operator concerned, and knowledge of costs and returns for various farm enterprises.

In the process of accumulating material for college

courses in farm management the assistance of thousands of farm families is necessary. This help has been generously given by farmers who not only allow us to observe their farms in actual operation, but make available for study and analysis the records of their experiences.

The account which follows has been prepared with two purposes in mind. First, though it is limited to a close study of one farm family's progress, it is a tribute to all farm people who have unselfishly shared their experiences with young people who will someday succeed them in this vital occupation.

Second, it furnishes an example of most complete co-operation over nearly half a century of an exemplary farm family, whose experiences are supported by exceptionally complete records over this long span of years.

A family's experience illustrates other relationships in living in a community and helping in its development as a good place in which to live.

Though modesty prompted this family to decline at first, they have been persuaded to let us use their records and tell their life story. They gave permission with the understanding that it might promote more general recognition of the contribution farm people are making to the education of farm youth and that good should come from showing young people some of the problems farm families have to face in life. The account demonstrates how many of these problems are satisfactorily solved and that an agricultural way of life can be enjoyable and rewarding.

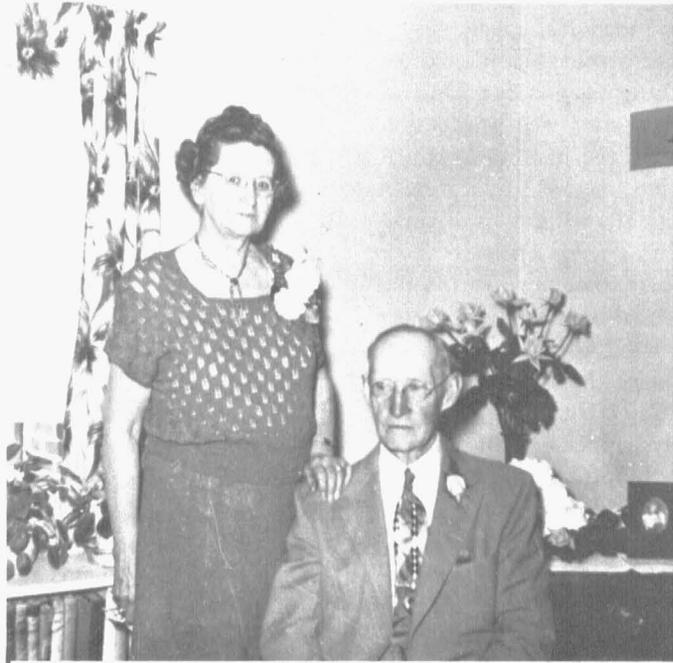
The community represented is in Saline County in central Missouri. The family is Mr. and Mrs. A. H. Orr and their daughter, Mary Grace.

This family met and dealt successfully with economic circumstances of the past fifty years. The report covers their experiences in good years and bad and indicates how they achieved the privilege of operating a good farm and eventually owning it free of debt. The conclusion gives their arrangement to transmit this business intact to the next generation.

Perhaps it will be helpful if we remember that beginning farmers today face a very different problem than Mr. and Mrs. Orr encountered fifty years ago.

More business management ability and a different kind of management capacity are required to farm successfully now. When we could depend on the land and its productivity almost altogether, we had a kind of security that we no longer possess. We now have to manage capital and anticipate changing economic circumstances if we are to pay operating costs, make adequate incomes and eventually own the business.

*O. R. Johnson
Chairman and Professor Emeritus
Dept. of Agricultural Economics*



Mr. and Mrs. Orr on their Fiftieth Wedding Anniversary, 1954.

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Orr Family

Case history of a farm family's adjustment to changes in a lifetime of farm management and rural living.

How Farm Visits Aid Study of Farm Management

Before getting into the case history, a brief review of the farm side of the farm management field will provide a clearer understanding of the contribution farm operators make to the training of beginners.

First, there are all degrees of abundance of resources available to farm families. Some have ample know-how and some have little. Some have adequate capital resources and some almost none. Labor may be an abundant resource or a scarce one. Attractions and opportunities in other fields are making good farm labor less available than formerly. Some farmers have enough land on which to use their skill, working capital, and labor force. Others have little or no land resources and little prospect of obtaining land. Thus every farm family presents a different inventory of resources.

Our students being taught principles only may be somewhat confused as they try to rationalize the application of these principles in their own situation of scarcity for some of the essential needs. For example, what do you do if you know what con-

stitutes an ideal crop and livestock program for a given situation but you have neither the land nor capital required to follow such a program?

Out in the country farm operators can be found who have fashioned a program under conditions of abundance of some and shortage of other resources, and many are doing well at it. Some good operators are farming entirely on rented land; others own some land and rent additional land to give better resource balance. Some operate intensively on limited available land and are doing well. They may have substituted capital and labor for limited acres. (See Table 1.) Resource combinations continue to shift through the years.

No Substitute for Seeing Real Thing

If a variety of farming circumstances is selected and the operations explained by the operators, possibilities are revealed that students otherwise might never see. No skill in presenting scientific and mathematical alternatives in the classroom is good enough to substitute entirely for actually *seeing* this process being used by a farm family on the land.

One can observe actual farm layout with its excellence and weaknesses, or a livestock program that may not be scientifically perfect, yet it works. We are shown how necessary economies have generated modifications in the resourceful minds of farm operators, and these modifications have enabled them to go on with their program and actually make progress.

While we look mainly for excellence, we often gain valuable lessons from examples of efforts that failed. We find many farm cooperators anxious to receive suggestions for improvement in their own procedures, examples of which may have been observed on other farms or from a more accurate interpretation of important principles.

Thus are observed operations on many grades

TABLE 1--DISTRIBUTION OF SALINE COUNTY FARMS ON A TENURE BASIS. (U. S. Census, 1910-'54)

Year	Number and Percent of Farms Operated by								Total Farms
	Owners		Part Owners		Tenants		Managers		
	No.	%	No.	%	No.	%	No.	%	
1910	1580	51	458	15	1041	34	0	0	3079
1920	1658	55	381	12.5	969	32	16	x*	3024
1930	1173	43	572	20	1015	37	4	x	2764
1940	1046	40	472	18	1102	42	17	x	2637
1950	1256	52	555	23	585	24	6	x	2402
1954	1122	53	496	24	490	23	7	x	2115

*x = less than 1%.

of lands, a variety of systems of farming, and varying degrees of excellence of resource management, always with the objective of learning how to do things better. We wish to learn how good management functions in the face of resource limitations. Excellent as well as poor jobs of farming are to be found on poor lands as well as on good, or with limited as well as abundant resources. Our only limitation from a training standpoint is available time and our use of that time. Many farm families are willing to help if we only ask them. This assistance has been utilized intensively like that of the Orr family, and that of others in a more limited way. Thru the years more than two thousand farms have contributed to this phase of the study of farm management in Missouri alone.

Review Setup with Manager

For the intensively studied management system the usual procedure includes an examination of the farm, its soil, layout, improvements, water management and fertility programs, the cropping and livestock system, the record of yields and livestock production, cash operating expenses, receipts, and inventories at the beginning and end of the year. Then the farmer is asked why he has the setup and enterprises as they are. The summary is reviewed with him and he indicates what changes he would make if he had the necessary means. The class discusses his problems with him and occasionally is able to help him work out improvements after carefully analyzing the record.

Frequently reasons other than economic ones are encountered, which, in the judgment of the operator and his family, outweigh economic gains which might result from some modification of present practices. These occur in enough cases to justify the conclusion that personal or community situations must not be overlooked in appraising programs of farm families. As the Orr plan of operation is studied, these features are given more than casual attention.

With this review of cooperation with the University in the applied farm management field, attention is now directed to an appraisal of the quality of farm management practice as observed over almost half a century of actual recorded practice on the Orr property.



1920



1946

THE

ORR

FAMILY



1957

Milestones in an Eventful Farm Family Life

Assembling the Farm Business Unit

A summary of the development of the Orr farm will help show how the present acreage was brought together:

Mr. Orr's father, James Orr, bought the first 79 acres in 1877, just two years after Harry's birth. This first piece of ground cost him \$37 per acre. It included the land where the present residence stands. Practically all of it was tillable and practically all of it was fenced and cross-fenced with Osage Orange. Some of these hedges are still standing though most of them have been removed. They have been replaced mostly with modern, hog-tight, woven-wire fencing.

The land is highly productive. It is gently rolling and not subject to serious erosion. The soil is generally classified as Marshall soil. It has a rather deep top soil well supplied with organic matter, and a loose structure that absorbs moisture easily. For the most part it is sufficiently rolling that tile drain is not required. At the same time it is resistant to drouth.

Twenty-eight years later (1905) James Orr purchased an adjoining 118 acres. For this land he paid \$100 per acre. This was the first land in the community to be transferred for as much as \$100 per acre. This made the farm unit 197 acres. Ten years later (1915), 252 acres were added. The farm then stood at 449 acres until the autumn of 1954, when Harry purchased 94 acres adjoining the home farm on the northeast. This 94 acre unit was being sold to settle an estate. Harry acquired it partly because he wanted it and had the money to pay for it, partly because it was excellent land and, finally, it more nearly rounded out the boundaries of the home farm.



The first Orr home, side entrance, showing screened-in porch where they served farm management classes a dinner after field trips. (1928)

These 94 acres had an unoccupied house and a barn on them. The house has since been removed, another instance of acreage consolidation and the disappearance of a farmstead no longer needed.

A Son Chooses to Follow His Father's Example

Harry, the oldest of seven living children¹—five boys and two girls—was born in 1875. Probably partly because he was the oldest son, he early shouldered much of the burden of work and management of the Orr farm to provide the family's living and keep the younger brothers and sisters in school and through college. The longer he worked with and for his father the better the life of a farmer appealed to him. He was so devoted to the farm and so necessary in its operation that he could not be spared to complete a college course. He did manage one semester at Missouri Valley College and a Winter Short Course at the Missouri College of Agriculture. He was one of the most regular attendants at field days, especially when livestock production and feeding were emphasized. He became a vigorous supporter of his state's experimental and research work.

In later years when economic conditions were unfavorable, Mr. Orr sometimes questioned his decision. As he expressed it, "The twenties and thirties were pretty rough years on farmers. The combination of deflated prices and the land indebtedness I

¹Two children died in infancy.

had assumed was very discouraging at times. It often made me wish I had some other kind of a job; but having no knowledge of anything else than farming, I had only one choice in the matter and stuck to it."

This memory must have made his final success only the more gratifying. Through some of these "pretty rough" years he had watched his equity in this fine farm shrink to less than half what it had been in 1918, and to almost a standstill for nearly 25 years. During this slide from the war-inflated figure of January, 1919, and the slow recovery of the next quarter century, Mr. Orr continued to apply manure resulting from larger purchases of feed and feeders. This soil improvement went on in spite of market quotations on real estate. He also succeeded in improving the drainage situation on a 110-acre creek-bottom field to the extent that it took its place in the regular crop program, thereby materially expanding the net energy production of the farm. Thus the supporting capacity of the farm was increased in spite of depressed land values. At the present time the farm has approximately three times its 1918 earnings value. A considerable part of this increase may be credited to persistent application of good soil management during these uncertain years. With the return of more normal price conditions following World War II and the Korean War the Orrs' earning position was stronger than ever.

Mr. and Mrs. Orr's daughter, Mary Grace, was a bright, vigorous youth in her high school career when we first knew her. She helped with everything about the farm and home in addition to her school and community interests. She was really serving as both daughter and son to Mr. and Mrs. Orr, helping with both farm and home work. In addition to her regular duties her father employed her to keep the records of the business, which she did enthusiastically.

Misfortune struck Mary Grace in the form of arthritis. While this destined her to spend years in a wheel chair, her active mind and cheerful disposition never faltered. In spite of her physical handicap she completed the last two years of her high school work, received her diploma, and finished two years of college work at Missouri Valley College, Marshall, Missouri.

Mary Grace has performed near miracles with her mind, her hands, and her heart. She became a skilled artisan at handwork and she has maintained an alert interest in her home and the farm business. Once when the roof over her head was afire and she helpless in a hospital bed on the first floor of their home, she refused to let the neighbors take her out of the burning house until they had first removed her father's desk full of farm records and business papers. Said Mary Grace, "When I was a little girl, Dad taught me that if a fire ever occurred, the desk must be our first concern. So take the desk out and then come and get me." The men respected her instructions and followed them.

Her father still depends on her memory of events, prices, sales, etc., and this often saves going to the books for such details. Recently, after 25 years in bed or wheel chair, she has been able to walk across the floor again.

Through the love and care lavished on this girl by her father and mother and a home atmosphere of cheerfulness and optimism, the Orrs have revealed something perhaps more valuable to our students than good business methods. They have provided living evidence that understanding minds and Christian virtues are still present in an almost mechanical and overwhelmingly material world.

Financial History of the Orr Farm

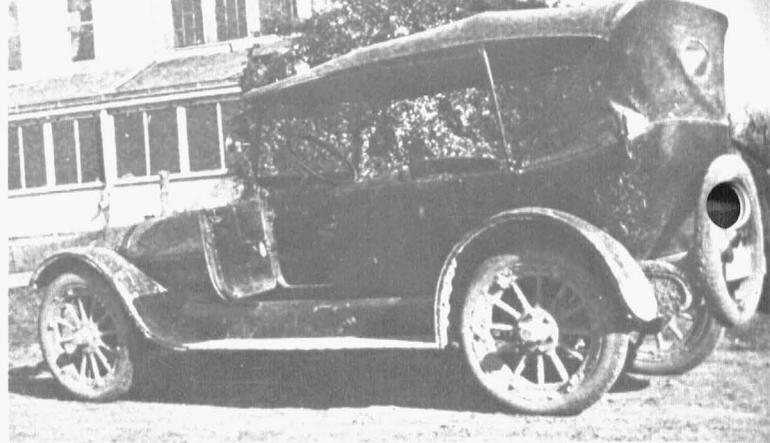
After the death of Harry's father and mother in 1915, he found himself responsible for the farm, its \$14,000 mortgage debt and the problem of making adjustments with the other six heirs to the estate. Over a period of the next eight years he managed to pay each of the six heirs \$6,000 for their net share while assuming the full mortgage. If his creditors had shown less than full confidence in his ability to work his way out, the estate might well have disintegrated, as so many good farm units do on the death of the proprietor.

Harry had a mortgage debt of nearly \$50,000 by 1925, but he had \$26,000 unencumbered operating capital and a mortgaged farm worth perhaps \$66,000 or \$70,000, including what he had "plowed back" while managing the property.

In 1919, his youngest brother was discharged from World War I armed forces and decided he

wanted to be a partner in the farm operation. So he gave Harry a note for one-half of the operating capital. Deflation set in and the operating capital inventory started shrinking. The record for two or three years indicated almost no earnings above interest on capital. At the end of the second year the brother took his note back and decided he did not want to farm. He resumed his study of law, which had been interrupted by the war. Today he is a successful attorney in Kansas City.

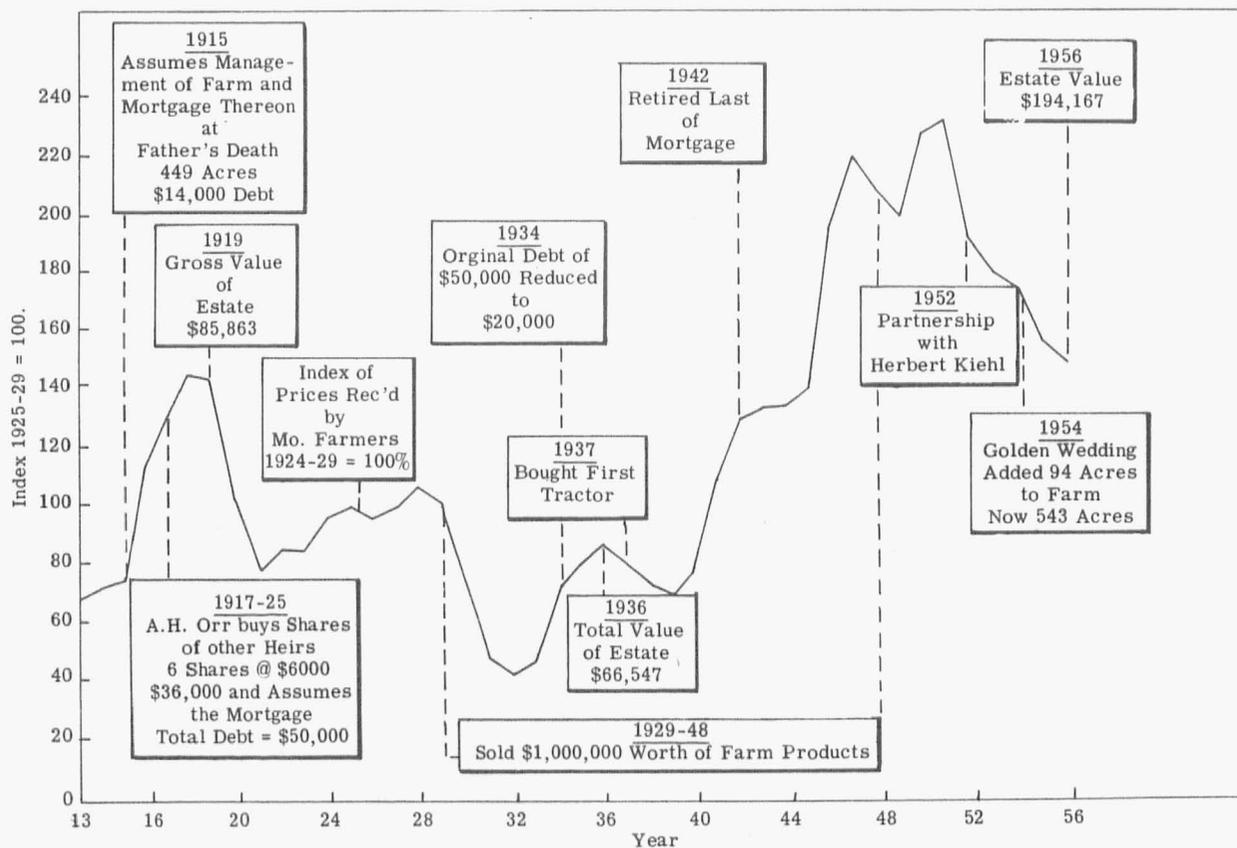
Since then Mr. and Mrs. Orr and Mary Grace have carried on safely through the depression of the early thirties, the drouths of '34 and '36, Mr. Orr's serious illness of 1925-32, and the loss by fire of the farm home in 1946. Now that it is time to relinquish the more vigorous part of the farm operation, they have provided for succession by a younger man in a manner fully equal to their excellent performance as farm operators and dependable, responsible citizens



The first family car, 1927.

of their community and state. These achievements are detailed in subsequent sections of this account. Here, we will only report from the record that the Orr's sold from this farm between 1929 and 1949 a total of \$1,000,000 worth of products, a rate of \$50,000 per year.

Fig. 1—Milestones of the A. H. Orr Farm, 1915-1956.



Evidence of

Management

In using farms to illustrate the application of principles of farm management, we encounter varying degrees of excellence in the total picture as well as in specific parts of a complex farm business organization. Consequently, we try to provide students with examples of a variety of degrees of excellence in the management of a farm business.

Since first selecting the Orr farm for cooperation in the teaching of farm management in 1916, a good deal of evidence has been revealed which points to superior ability of Mr. Orr as a farm manager. It is this evidence that is reviewed in the following comments. The statements are based on the records of his operations through the years. Certain years have been deliberately selected because circumstances beyond his control created problems and called for the exercise of unusual judgment in modifying operations to meet these circumstances.

First of all, it is obvious from the history of his operations that Mr. Orr recognized the importance of having a farm large enough in acreage and productivity to make acceptable earnings possible. His father before him had recognized this requirement and, as the account indicates, had assembled an adequate number of acres of very good land. In spite of adversity encountered in some years, they held this farm unit together. Furthermore, productivity of the land in adverse years was maintained because they expected to use that land a long time and insisted on having an improving level of production at all times.

Excellence

There is convincing evidence, too, that ample operating capital was regarded as very important. Harry's father impressed him with the weakness of his position if, in day-to-day operations, he ever found himself at the mercy of credit agencies. Harry expresses it about this way: "If possible, never get yourself into a position where you *have* to sell a chattel to meet an obligation, or can't buy some feed, calves, or pigs, when you can use them and the price is right."

Consequently, in such years as 1920 and 1921 Mr. Orr actually added to operating capital, which enabled him to operate in spite of reduced farm earnings. In 1919 the value per acre of the Orr farm, based on community land values, was about \$160. Mr. Orr had operating capital equal to \$31 per acre.

In 1936, after the 1920-21 and 1930-33 depressions had reduced land values, the farm was worth only \$119.00 per acre but Mr. Orr's operating capital was still \$29 per acre. Thus, while his real estate capital had shrunk 25 percent in that period of 17 years, his operating capital per acre was down only \$2.00 or approximately 6 percent. Furthermore, in 1936, \$29.00 of operating capital per acre would support a higher volume of business than the \$31.00 in 1919.

There is other evidence that leads to the conclusion that Harry Orr possessed considerable management ability in handling his capital. In 1903 he be-

TABLE 2--CHANGE IN CAPITAL STRUCTURE* (In Dollars)

Year	Real Estate	Machinery and Power	Other Operating Capital	Total
1919	71,840	3,575	10,448	85,863
1936	53,487	4,542	8,518	66,547
1939	59,587	5,512	13,817	78,916
1940	60,000	4,583	17,691	82,274
1956	138,750	12,754	42,663	194,167

*These figures as well as those of the succeeding tables are based on rather complete accounts kept on this farm throughout the entire period. The reader must understand that some of these figures are calculations from those records.

gan joint operation with his father with only \$1,000 in savings. He had accumulated these savings from wages which were about one dollar per day. By 1919 his operating capital was \$26,000. He owned no land when he began with his father, but in 1919 he had taken over the farm from his father's estate, had assumed a \$14,000 real estate mortgage which was on the farm at his father's death, and had begun to assume additional real estate debt necessary to purchase his brothers' and sisters' shares in the estate and keep the farm intact.

By 1919 the capital in the farm business was almost \$86,000. Harry was carrying a real estate debt at that time which must have been in the neighborhood of thirty or forty thousand dollars.

One practice Mr. Orr followed which helped to protect the operating capital account was the maintenance of feed reserves. He regularly bought livestock to feed out, and at the same time purchased almost as much concentrates as the farm itself furnished.

In those earlier years he would ordinarily have about half enough feed in his cribs, granaries, silos, and hay barns to take care of his year's needs. About two-thirds of his roughage was pasture or other crops used for grazing. In 1936, when pastures especially suffered from drouth and feed was scarce and relatively expensive, Harry avoided having to buy more than nominal feed supplies by growing extra roughages and drawing heavily on reserves of concentrates in the inventory.

Thus he was able to carry on about a normal volume of livestock feeding. That year his feed inventory declined by over \$4,000 due to shrinkage in

feed concentrate reserves. He purchased about half the normal amount of corn but none of the commercial feed and supplements which he ordinarily bought in considerable volume. With the next two crop years he began restoring feed reserves. In 1937 corn was \$1.04 per bushel and in 1938 it was 48 cents. Feed reserves saved him nearly half the cost of purchased concentrates.

Changing prices, costs and margins have made necessary important changes in production policies on many Missouri farms. At one time Mr. Orr kept brood sows to raise the pig crop to be fattened and sold. He also kept a small herd of good grade beef cows to produce part of the calves he fed out. He soon concluded that these breeding animals were consuming an important part of his labor and feed resources and curtailing the volume of sales of fat cattle and hogs. Consequently, he decided to eliminate breeding animals from his program so the entire feed supply could be devoted to making beef and pork to be sold. He did recognize that greater risk would be involved but with 20 years of experience in buying feeders and much of the feed they consumed, he concluded that he should be able to realize more net income and reduce his labor burden by making the shift.

His practices revealed more than skill in handling capital and modifying farm enterprises when changing conditions indicated. He usually kept two year-round workers on his farm. He provided comfortable houses for married workers. They were also furnished garden land, were permitted to keep a small flock of poultry—fed from farm-produced feeds, and were furnished an adequate supply of dairy prod-

TABLE 3--IMPORTANCE OF PURCHASED FEEDS AND GRAZING ON THE ORR FARM

Year	Concentrates Used (Net Energy)		Roughages Used (Net Energy)†	
	Total Units	Percent Bought	Total Units	Percent Grazed
1919	6,973	58.2	8,022	60.5
1936*	9,077	30.3	11,970	55.1
1939	9,468	69.3	16,889	69.0
1940	8,855	73.0	13,423	70.9
1956**	18,409	29.5	12,243	47.9

*The year 1936 was a drouth year and that fall corn was \$1.04 per bushel. The 1937 and 1938 crops brought from 47 to 48 cents.

**In 1953 Mr. Orr formed a partnership with Herbert Kiehl, who is a vigorous young man very skilled in rearing and saving pigs. The partnership, with Herbert able to carry the extra work load, has gone back to a much more intensive production rather than a feeding program. More corn is grown and more of the pig crop is produced on the farm. Now 600 to 800 pigs are farrowed and fed out where formerly 300 to 500 stock pigs were bought and fattened.

†All roughages used were home produced except for the occasional leasing of pasture land in adverse grazing seasons.

ucts and meat. Mr. Orr kept enough milk cows to provide at least one quart of milk per person each day.

Workers were given vacation with pay. What amounted to sick leave was also sometimes provided. For example, one of his workers had his father living with him. The father had to make periodic visits to a state hospital for treatment. The worker was allowed time to take his father to the hospital with no deduction from the worker's pay check. These farm workers were highly dependable, loyal and conscientious about performing their duties. At present regular hired workers are provided with fully modern homes.

It has already been pointed out that Mr. Orr re-

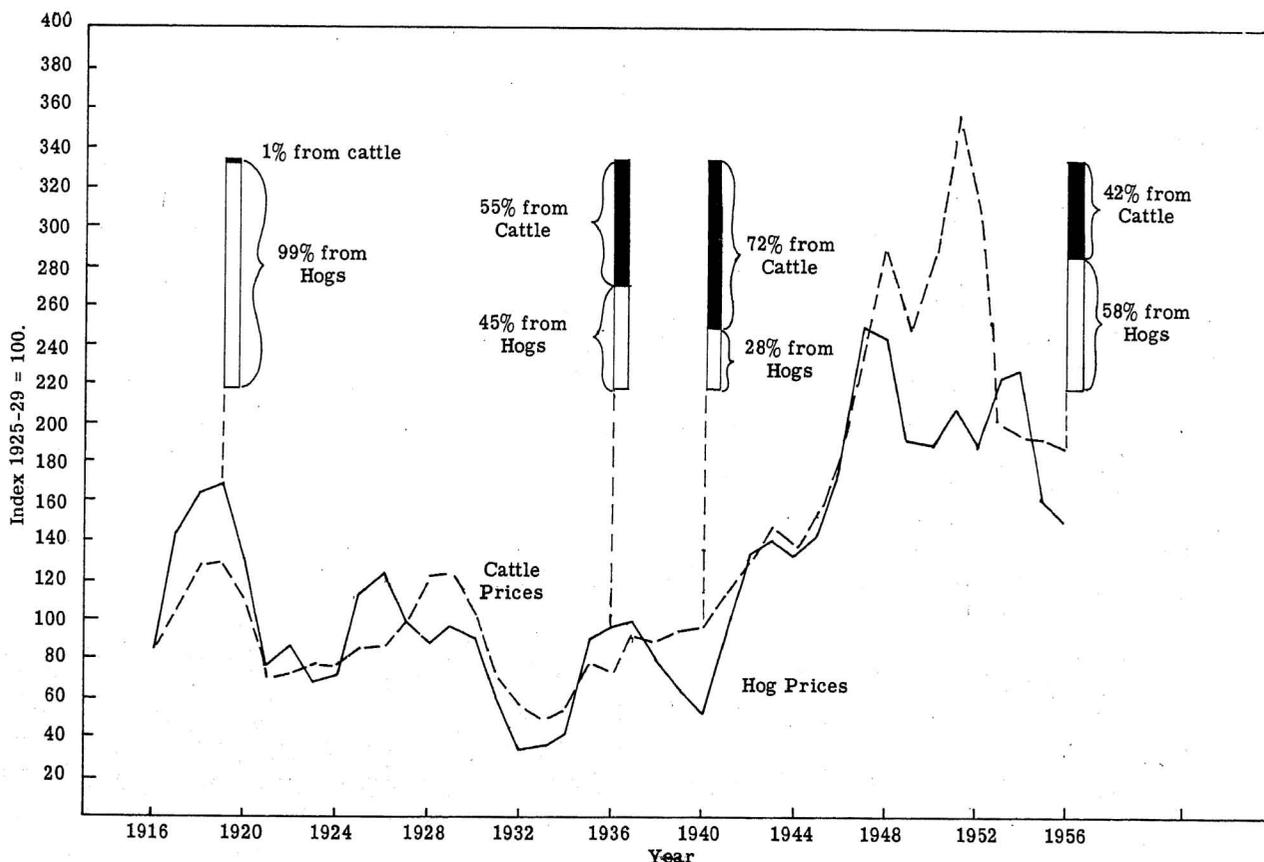
fused to deplete his land. Some of the earliest terraces in the state were on the Orr farm. In class trips over the farm we found terraces in use as early as 1930.

Because of careful cultivation and weed control practices, few weeds could be found on tilled fields or meadows. A student touring the farm commented, "There are not enough weeds on this entire 30-acre field to make a turkey's nest."

The Orr farm records contain many other evidences of good management. In 1919 the farm was valued at \$160 per acre. It declined 25 percent in subsequent years. As late as 1945 it was valued at only \$134 per acre. Since 1940 it has increased to \$256 per acre. Operating capital, which was \$31 per acre in 1919, was \$50 per acre in 1940, and a little more than \$100 per acre in 1956. The corn yield was 45 bushels per acre in 1919. In 1956, a good but not unusual farm year, it was 71 bushels per acre. Some comparisons of Orr farm corn yields with county and state averages appear in Table 4.

The amount of capital tied up in machinery and power should be noted. Mr. Orr's farm was well

Fig. 2—The graph lines show average prices received by Missouri farmers for hogs and cattle from 1916 to 1956. The bars show percentages of the Orr farm's net sales that came from hogs and cattle during four of these years. Observe how emphasis on these two major sources of income shifted as the price advantage changed.



equipped. He had ample machinery for the period and plenty of power, consisting of horses and mules in early years, and tractor and electric power a little later. The capital value of his machinery and power in 1919 was \$3,575. In 1956 it was \$12,754. His operating capital, other than machinery and power, represented mostly in livestock and feed, was just a little more than \$10,000 in 1919, and in 1956 it was \$42,663. These details were reported in Table 2.

Total sales and increase for the farm amounted to \$20,000 in 1919. By 1956 this had climbed to approximately \$74,500. Orr's expense account was \$16,375 in 1919 and \$47,654 in 1956. Farm income, meaning the difference between receipts plus increase on the one hand and expenses plus decrease on the other, was \$3,954 in 1919 and \$26,835 in 1956. See Table 5.

One of the best measures of the influence of management on land productivity over a farm opera-

tor's lifetime is what farm management technicians call the net energy per acre change. An energy unit is equal to the energy value of one bushel of No. 2 corn. Table 6 traces the net energy change on the Orr farm from 1919 to 1956.

This measure takes in production from every acre of the farm, including the high yielding and the low yielding crops. The acres in corn naturally give a high energy output per acre while unimproved pastures give a low one. All crops and all kinds of products from the soil are combined in this measure. The net energy output of the Orr farm in 1919, which was a good farm year, was 25 units per acre. Twenty-five energy units per acre actually represent about the average output from a typical farm on our more productive soil areas, or about what a farm in the upper 15 or 20 percent of the productive lands of Missouri would provide in an average season. This is about where Mr. Orr started in 1919.

TABLE 4--COMPARISON OF CORN YIELDS FOR MISSOURI, SALINE COUNTY, AND THE ORR FARM

Year	Corn Yield, Bushels per Acre			Price per Bushel Received by Farmers**
	Missouri	Saline County	The Orr Farm	
1919	26.5	39.5	45.0	\$1.62
1936	8.0	4.8	45.0	.89
1939	29.5	38.4	50.0	.47
1940	30.5	34.3	50.0	.59
1956	48.0	49.3*	71.0	1.30

(From Missouri Farm Census, State Department of Agriculture and United States Crop Reporting Service)

*For 1955.

**A low of 16¢ was reached in 1936.

TABLE 5--ORR FARM INPUT-OUTPUT RELATIONS FROM 1919 TO 1956

Year	Acres Farmed	Total Sales and Increases	Total Expenses	Farm Income	Labor & Management Income of Operator
		\$	\$	\$	\$
1919	449	20,329	16,375	3,954	- 339
1936	449	22,678	18,447	4,231	2,300
1939	529*	29,693	25,059	4,634	2,030
1940	529*	31,973	23,879	8,094	5,176
1956	543**	74,489	47,654	26,835	17,127†

*80 acres pasture cash rented.

**Bought 94 acres two years ago.

†This labor income is for the two partners in 1956, - one working 12 months and the other 4; 12 months management for each.

TABLE 6--MEASURE OF PRODUCTION PROGRESS ON ORR FARM, 1919-1956

Year	Corn Yield per Acre		Net Energy Value per Acre*	Dollar Value of Production per Acre**	Dollars per Unit of Energy
	Saline County	This Farm			
1919	39.5 bu.	45.0 bu.	25.04	\$19.92	\$0.795
1936†	4.8	45.0	31.81	13.69	0.430
1939	38.4	50.0	33.44	7.47	0.223
1940	34.3	50.0	34.40	13.19	0.383
1956	49.3	71.0	44.22	20.08	0.454

*Based on actual crop and pasture yields and net energy values given in balanced farming handbook, (1952).

**At current farm market prices.

†A severe drouth year.



Early power at the Orr farm included Old Pet and part of her offspring. Two of her earlier mule colts had been sold. The six mules shown were sold to purchase

the first tractor owned in 1937. The two mules on the right are twins.

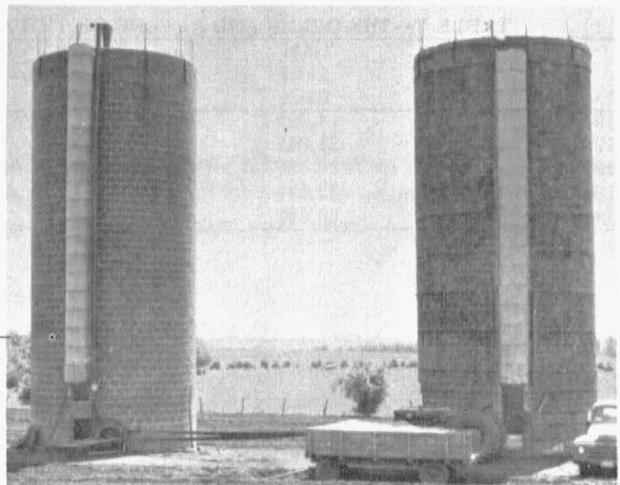
While the years chosen to show his progress were sometimes problem years, like dry 1936, the data on production from the land still show that he made progress through the entire period from 1919 to 1956. The net energy output for the farm in 1956 was 44 units per acre, which is very high for a farm on good soil, where more than half of the land was producing only roughages and more than one-third of it was in crops which were harvested by livestock. Even in 1936 Mr. Orr succeeded in obtaining approximately 32 units of net energy per acre. That is an increase over 1919, a good year, of seven units, which is quite an achievement. A good many illustrations may be found of corn yields being doubled between 1919 and 1956, but not many can be found where the net energy production from the entire acreage has gone up 75 percent as it did on the Orr farm.

Another important management feature revealed in the Orr program is the manner in which volume of output was expanded without increasing the labor requirement of the farming system. Two factors are involved and both seem to have been well handled. The first one is the need for increasing volume of output without corresponding increases in cost. It



Filling silo at the Orr farm before the days of the tractor and field harvester.

Filling silos with the farm tractor a few years later.



Putting grass silage in the silo after the development of the field harvester.

takes good livestock management to do this. It is well known that the rate of pay per hour for livestock operations on most farms is lower than the rate for high profit crops like corn or soybeans. However, livestock labor requirements are spread throughout the year and more of that labor comes in the months of comparatively low employment on the farm. In contrast, crops require more hours of labor in the "rush" season of the year when labor has a very high value per hour. This means that a skillful livestock man hopes to have enough livestock operations in the non-crop season to keep the men required in the crop season about fully employed. Mr. Orr achieved this by purchasing a considerable volume of livestock and feed to keep his workers busy in the winter and other non-rush periods.

This same planning achieved another result, the sale of a little more than one million dollars worth of products from the farm in a 20-year period. This second effect is because a good feeder of livestock with a limited labor force can actually "process and merchandise" the product of many more workers who have spent their time in producing the feed and growing the animals to a feeding age. Thus, Mr. Orr and two co-workers on his farm utilized the product of the labor of 15 or 20 persons who had spent their time in growing the feed he fed and the animals which he purchased to eat that feed.

A practice which many farmers follow as labor costs increase and livestock prices go through their usual course of ups and downs was also observed on the Orr farm. This was to have as much of the crop as possible harvested by the animals themselves. For example, more than half of the net energy repre-



sented in the roughage production of the farm was in crops which animals harvested. See Table 7.

In all the years except one, home-grown concentrates made up less than one-third of the total energy units consumed by livestock. Cash crops were almost completely out of the picture on this farm. In net balance, cash crops were unimportant compared with the total amount of feed purchased from off the farm and fed on the land.

Further evidence of quality of management is revealed in the "pay-off" figures. These figures are expressed in "returns per dollar of feed used." This means that if the net money income from the sale of animals gave \$1.50 for each dollar's worth of feed consumed, the enterprise paid for the feed and contributed 50 cents toward costs other than feed. Records over many years reveal that between 20 and 30 cents is needed to cover costs including wages over and above the feed bill in feeding cattle and hogs. With this explanation of the term, attention is called to the results on the Orr farm.

The year 1919 was a tough one for feeders of livestock. The stock and feed prices were high until

TABLE 7--THE ORIGIN AND NATURE OF THE FEED USED ON THE ORR FARM. (In Net Energy Units)

Year	Total Feed Used	Concentrates		Roughages	
		Home Grown %	Bought %	Harvested %	Grazed %
1919	14,995	19.4	27.1	21.1	32.4
1936	21,047	30.0	13.1	25.6	31.3
1939	26,357	11.0	24.9	19.8	44.3
1940	22,278	10.7	29.0	17.5	42.8
1956	30,652	42.3	17.8	20.8	19.1

about the end of the year; then, when the animals were ready for the market, fat cattle prices dropped about one-fourth. In this case, since Mr. Orr had been compelled to pay market price for the feed his cattle and hogs ate, they returned to him only 70 cents for each dollar of feed (Table 8). This is the chief reason why his labor income at the end of 1919 was a minus quantity. The more he fed the more he lost. This is typical of our best livestock operators in years of abruptly declining livestock prices. However, he recovered from this unfortunate economic situation, and in 1936, a dry year when he would have been forced to purchase fairly high-priced feeds again if his reserves had not taken care of him, he made \$1.42 for each dollar of feed used. This is why he made a good labor income that year.

TABLE 8--THE LIVESTOCK ENTERPRISE - COMPARING NET SALES AND INCREASE WITH MARKET VALUE PER NET ENERGY UNIT.

Year	Net Sales & Increase per Energy Unit	Market Value per Energy Unit	Returns per \$ of Feed Used
1919	\$.58	\$.83	\$.70
1936	.84	.59	1.42
1939	.57	.39	1.45
1940	.78	.49	1.61
1956	1.35	.98	1.38
Average for 5 Years	.87	.66	1.32

His average generally has been enough to pay him a fair margin on his livestock operations after paying for the feed. Here again, volume of business, multiplied by a fair margin of profit, is responsible for his building the estate which he has built. This experience is not unlike that of many very successful merchants and manufacturers.

There is another cost item which reveals careful thinking on the part of the management. This is the comparative cost of a net energy unit when that unit comes from concentrates, roughages which have to be harvested before being fed, and roughages which animals themselves can harvest. Briefly, the figures

are these: On the Orr farm a unit of energy represented by *concentrates*—grain and mill feeds—cost about a dollar (Table 9). *Roughages* which had to be harvested before being fed had an energy unit cost of 63 cents. *Roughages* which the animals themselves harvested had a cost of only 19 cents. In other words, the gains made from grazing or from eating harvested roughages were relatively inexpensive.

TABLE 9--COMPARATIVE COST OF A NET ENERGY UNIT DERIVED FROM CONCENTRATES, HARVESTED ROUGHAGES AND GRAZING FOR SELECTED YEARS.
(In Dollars Per Unit)

Year	Concentrates	Harvested Roughages	Grazing	Cost, All Feeds
1919	\$1.33	.78	.14	.83
1936	.76	.68	.28	.59
1939	.74	.40	.10	.39
1940	.80	.58	.14	.48
1956	1.26	.74	.39	.98
Average all Years	1.01	.63	.19	.66

It should be remembered that there is an "intensity" feature involved in these figures. The energy obtained from an acre of grazing land is small compared with that from an acre of corn. While it costs less than the corn energy unit, it still requires many more acres to give dollar volume of business. Any farm manager would like to have as much volume as possible provided he is fairly confident of the usual profit margin; so he must combine acres which produce a large output of energy units with those which must be kept in low volume pasture. This is another example of the reasoning Mr. Orr used in determining his farming program.

Increase in power and equipment is another phase of farm program development. For each workman in 1919, Mr. Orr had a little less than \$1,200 tied up in power and equipment. By 1956 it was almost \$5,000. Something had to happen to cover this increasing cost of equipment per worker. What happened on the Orr farm is shown in Table 10.



A more recent cattle barn standing at the edge of the feedlot. This lot of about four acres is terraced and grows a crop of corn each year.

Measuring the normal labor requirement of the farming system in ten-hour days of an average working man, Mr. Orr was obtaining a total of 267 ten-hour days of work from himself and his co-workers in 1919. The number of ten-hour work days is designated in the table as productive work units per man (P.M.W.U.) The figure of 267 in 1919 was achieved when each workman had only \$1,200 worth of power and equipment with which to work. In 1956, when each man had \$5,000 worth of power and equipment, he achieved the equivalent of 637 ten-hour days.

From the foregoing it is evident that a farm

manager has many problems which must be resolved as he meets changing prices, seasons and technology, and tries to fit all of these changes into the farming program for which he is responsible. It is little wonder that some farmers find the situation very confusing and are reluctant to take steps necessary to meet these changes. But many other farmers succeed in making this shift and profit by it. When the complexity of these problems is recognized, it is understandable that farmers have biological and meteorological as well as economic forces to contend with in keeping in step with the economic situation.

TABLE 10--INTENSITY IN USE OF LABOR AND OPERATING CAPITAL

Year	Acres Farmed	Crop Acres per \$100 in Power and Equipment	P.M.W.U.* per Man	P.M.W.U.* per \$100 in Power and Equipment	Capital in Power and Equipment per Man Equivalent
1919	449	6.46	267.2	235.04	\$1,136.6
1936	449	4.78	311.3	222.72	1,397.5
1939	529**	3.71	479.1	241.54	1,983.4
1940	529**	3.47	555.1	315.13	1,762.7
1956	543†	2.47	637.7	130.01	4,905.3

*P.M.W.U. = A Productive Man Work Unit = 10 hours of productive labor.

**80 Acres pasture cash rented.

†Bought 94 acres two years ago.

Resourcefulness

in

Day-to-Day Problems

The practices of greatest over-all significance have been presented but there are a number of day-to-day problem solutions that contribute to long-run improvement. These are necessary to avoid obsolescence and loss of efficiency in use of the production factors.

Modernizing the Farm Scales

The first set of scales on the Orr farm was installed before the time of the modern truck. Animals

were driven onto the scales or hauled onto them in a lumber wagon. Early in the 1930's Mr. Orr observed that most of the hauling was by truck, so there was nothing to do but install a larger platform scale that would hold either a livestock truck or any other long-bodied vehicle. This was the explanation Mr. Orr gave when the students wondered why he had two sets of scales.

Remodeling the Horse Barn

Another item noted in examining his farm was the partial obsolescence of the barn which originally housed work stock, milk cows, and considerable feed. Naturally the students wanted to know how the space was to be used now that power equipment had displaced work stock.

Mr. Orr, in his usual methodical manner, had figured quite a while on just what should be done. This barn is a bank barn, and fairly large. The work stock were kept in the basement. The foundation walls were of concrete some seven or eight feet high and about 14 inches thick. Mr. Orr reasoned that

this basement space should make good storage space for equipment and supplies. But most equipment would not go through the barn door that had been designed for work stock in single file.

The problem seemed to involve the removal of a section of the foundation to provide a wide doorway and the insertion of an I-beam above the opening to support the superstructure. If a section could be cut from the wall and lowered outward, it would provide a "paved" entrance and save some expense and inconvenience.

The section could be cut with a drill and the I-beam installed easily enough. The question of how to lower the wall section in the excavation and still recover jacks and timbers was not so simple. A neighbor boy who had read his "Popular Mechanics" provided a solution,—namely, to lower the section on a few blocks of ice, remove the jacks and let the summer sun dispose of the ice supports. This simplified the problem. A wide doorway for farm machinery gave access to a loafing area beyond the horse stalls which provided useful equipment shelter.

Removal of partitions in the horse stall area and similar widening of the outside door to these stalls made additional storage space easily accessible. Now practically all the former horse, cow and calf area is converted to current use.

The Modern Granary in 1928.

In 1928 Mr. Orr built what is even today a modern granary, equipped with a dump, elevator, and chutes for loading. His dump and elevator are home-built, now operated by electric power from a portable motor. The granary has a capacity of 5,000 bushels, with tight bins for small grain in the second story and cribs for ear corn on both sides of the driveway up to the second floor. The elevator is in the floor of the driveway, and elevates grain and ear corn to the second floor where it can be directed to any one of the storage bins in the second story. The corn cribs are constructed with tilted concrete floors to save some of the scooping. Mr. Orr says this isn't as effective as they thought it would be.

Few farms in Missouri had such modern arrangements for unloading feed as early as 1928. The motor would lift the front end of the wagon or truck and let the grain run out at the rear endgate into a hopper underneath the floor where conveyors would pick it up and carry it to whatever bin was to be used.



Mr. Orr explaining to the class how the horse barn door was widened.

Combating Grasshoppers in Meadows

Another device emphasizing the resourcefulness of this farm operator was a field-harvesting grasshopper trap which he used before modern methods were devised for poisoning grasshoppers. This trap consisted of a structure on wheels a good deal like a sweep rake except it was much wider. Instead of the teeth of a bull rake it had oil vats some six or eight inches deep and extending the full width of the trap, about 20 or 25 feet, built in sections for ease of handling. These vats were filled with a few inches of crude oil. Behind the series of vats was a vertical canvass bumpboard or baffle to catch the grasshoppers as the vehicle was pulled across the field. From this bump-board they fell into the vat.

The instrument was surprisingly effective. It was drawn by two mules very similar to the way the sweep rake was operated in harvesting hay from the swath. Mr. Orr took this tool back and forth over the field of clover, alfalfa, or other crop where grasshoppers were feeding. After each trip across the field the hoppers had to be dipped out before the return trip. After the "harvest", numerous pyramids containing five or more bushels of dead hoppers were stacked at the ends of the fields. Damage to hay crops and adjacent corn fields was materially reduced by this invention. Mr. Orr probably will not claim it as original, but he got the idea from somewhere and adapted it to his needs.



Mr. Orr and his faithful companion inspect some of the steers on summer pasture. This dog is his animated truck horn.

The Pickup and Animated Horn

Mr. Orr's earliest means of getting over the farm was by saddle horse or cow-pony. One nearly 15 years old, is still kept as a pensioner on the Orr farm, living in luxury and idleness. He has been a "gentleman of leisure" for the last eight or ten years. Before that time, though a pickup had replaced some of the horse's duties, Mr. Orr sometimes used him when he wanted to get out among his cattle. It was mainly a matter of pleasure which a mechanical beast like the pickup could not provide. Also, most cattle are better acquainted with men on horseback. For the last several years our classes studying the Orr farm have been greeting this retired saddle horse when we get to his pasture. As you would expect, he follows us around like an old friend.

For the more vigorous chores of looking after the livestock and running errands the saddle horse has been retired and the pickup with its animated horn has been substituted.

A familiar sight when looking over Mr. Orr's farm used to be Mr. Orr and his pickup and a stock dog—one of several he has owned through the years—touring pastures on an inspection trip. The dog rode in the truck bed and barked his pleasure at the job he loved from the time the motor started. Classes

called this dog "the horn". When Mr. Orr wanted a closer look afoot, the dog was out of the truck and at his heels. When they were ready to leave Mr. Orr would say, "All right, let's go", and step on the starter. The dog would leap over the endgate into the truck and "talk" all the way home. (See photo.)

The Farrowing Houses

For several years Mr. Orr kept no brood sows. Years ago brood sows and their litters were a regular part of the livestock program. Then an infection developed (necro) in the soil of his hog lots, which made it necessary to suspend the brood sow phase of the hog enterprise for a few years until the infection could be cleared up. Now brood sows and their litters once more form a major segment in the livestock activities.

Mr. Orr early sensed that labor-saving was becoming more of a "must" in profitable farm operation. Among other measures, he developed a farrowing program that was more economical of labor than the individual farrowing houses so widely used on his and many other farms at that time.

First he poured a large slab of concrete for a combination farrowing house and feeding floor, which was long enough to hold about 12 individual

farrowing houses side by side. When not needed for this purpose, the slab could be cleared and serve as the feeding floor. It was wide enough to include a pen in front of each house, where pigs could get sunshine and exercise, and a runway beyond this (see picture). The individual farrowing houses are on skids for easy movement with a tractor. Electrical connections are provided so that by a plug-in process heat lamps are available to each farrowing pen to take care of the young pigs in cold weather.

A good-sized feed room at the end of this slab stores a few days' supply of feeds that can be distributed to each brood sow without entering her pen. When a litter is ready for clean ground pasture, the farrowing pens can be drawn off the slab with a tractor. Disinfecting and cleanup are quickly achieved.

This setup has been quite successful, having materially reduced the labor cost of caring for sows and their litters as well as reducing pig losses at farrowing nearly to zero.

Milk for the Employees

Several years ago Mr. Orr modified a common farm practice of allowing an employee to keep a cow to provide milk for his family. This practice did not always give a family the milk they should have. Even if the farm furnished the cow, more than one cow would be required to assure a worker's family of a milk supply every day of the year.

Mr. Orr shifted to a practice of keeping enough cows to supply every person on the farm at least one quart of milk every day. Thus the workmen would

milk, send to their own homes the milk allowance, and bring the rest of the milking to Mrs. Orr's kitchen. This has achieved three desirable objectives. First, it provides milk every day to everyone. Second, it has reduced the cost to the farm of keeping milk cows for the proprietor and his employees. A third desirable result is that the families of the employees get more milk and get it regularly. This was not always true when each workman had to provide his own milk supply. Another result is sometimes achieved—influencing the children of workers to actually consume about a quart of milk each day. Everyone seemed to like this plan better than former practices.

Labor Relations

For many years Mr. Orr has employed two yearly workers on his farm. The best evidence that wages and fringe benefits have been satisfactory is the length of service history of his helpers. This length of service has varied from time to time because of occasional needed replacements, but has been from eight to ten years in most cases. Turnover has never been due to dissatisfaction with the work, wages and working conditions.

Mrs. Orr and the wives of the employees work together in neighborly fashion. Mrs. Orr's kitchen and facilities are not strange to the other ladies. A recent class visit to the farm found the three ladies, with the little folks, providing some 12 or 15 hungry students and the farm labor force with abundant food.

Workers have comfortable and modern homes,

The battery of movable hog houses with sun porch, all on one large concrete slab. There are 12 of them with all modern conveniences.



and enjoy everything good farm homes can supply, along with the neighborly personal interest that goes with most country associations. Except for his years and an instinctive inclination to address him as Mr.

Orr, distinctions between employer and employee are not obvious. He provides good equipment, pays good wages, furnishes pleasant and convenient surroundings and treats his employees as fellow workers.

Management of Credit

Mr. Orr, like many young farm people, started with his father on the home farm with little capital of his own. He did have a one-seventh share in the estate, but this would not become a usable capital resource until the death of his father and mother. Harry worked with his father from 1894 until 1903, starting at one dollar per day. He was paid wages until he was finally accepted as a partner in 1903. By that time he had savings of \$1,500. Obviously this is a slow way of accumulating enough credit to operate a farm business of this magnitude.

His father's equity provided a credit base until the father passed away. Harry "ploughed back" his savings from his wages into the operating capital of the farm as soon as he became a partner with his father. He worked as the active manager of the farm from 1904 until his parents' death in 1915. Then he assumed responsibility for the \$14,000 mortgage on the farm. In addition he purchased the interest in the estate of each of his four brothers and two sisters within the next four or five years. This required either a lot of capital or credit, so he was faced with the problem of establishing a credit standing at the bank in order to finance the farming operations and these debts.

By 1919 he had accumulated a considerable equity in the estate, chiefly in operating capital, estimated to equal \$26,000. How he did this, starting as a dollar a day employee would make good reading in itself, but we must accept it as a fact and direct our attention to his need for and use of credit.

TABLE 11--THE FARM BUSINESS SUMMARY

	1919	1936	1939	1940	1956
Receipts	\$	\$	\$	\$	\$
Crops Sold	4,150.00	0	0	337.00	1,151.00
Live Stock & Products	7,192.00	22,678.00	25,725.00	25,025.00	60,562.00
Miscellaneous	15.00	0	758.00	592.00	326.00
Total Cash Receipts	11,357.00	22,678.00	26,483.00	25,954.00	62,139.00
Increased Inventory	8,972.00	0	3,210.00	6,019.00	12,350.00
Total Receipts	20,329.00	22,678.00	29,693.00	31,973.00	74,489.00
Expenses					
Hired Labor	2,217.00	1,814.00	1,819.00	1,292.00	2,557.00
Feed:					
Corn	3,441.00	1,782.00	2,200.00	1,330.00	1,633.00
Com. Feeds & Supplements	1,270.00	0	3,635.00	5,320.00	8,308.00
Machine Hire	2,008.00	320.00	387.00	674.00	1,071.00
Seed & Fertilizer	132.00	195.00	99.00	423.00	2,519.00
Taxes	244.00	264.00	359.00	333.00	1,115.00
Live Stock Bought	6,192.00	5,540.00	11,337.00	12,178.00	24,657.00
Other	871.00	2,021.00	2,843.00	2,187.00	4,753.00
Total Cash Expenses	16,375.00	11,936.00	22,679.00	23,737.00	46,613.00
Capital Imp.	0	2,209.00	2,380.00	142.00	1,041.00
Decreased Inventory	0	4,302.00	0	0	0
Total Expenses	16,375.00	18,447.00	25,059.00	23,879.00	47,654.00
Farm Income	3,954.00	4,231.00	4,634.00	8,094.00	26,835.00
Total Ave. Capital	85,863.00	66,547.00	78,916.00	82,274.00	194,167.00
Acres Farmed	449.	449.	529*	529*	543**

*Rented 80 acres pasture for cash.

**Bought 94 acres, mostly excellent crop land. Discontinued renting.

In 1919 the record shows that the real estate was valued at \$72,000 and the operating capital amounted to \$14,000. The expense account that year shows \$16,000 cash expenses. (See Table 11.) Obviously, this necessitated considerable borrowing.

Harry believes in reserves of credit for the purchase of livestock and feed. As he told our class time and again, "As soon as you can, you should accumulate enough reserves so you do not have to buy in a seller's market or sell in a buyer's market".

In all his years he has never been denied credit at the bank. Neither has he had to pay a premium for credit. He was and is regarded by the banks with which he has dealt as an excellent credit risk. He always followed his father's admonition to his sons, which was, "Boys, when you grow up and get into business you no doubt will need to borrow money. If you do and interest pay-day comes around and you find you are not going to have sufficient money on hand to pay the interest, go to the person you have the money borrowed from before the interest becomes due and explain the situation. He no doubt will give you an extension."

Harry's bank knew him from another standpoint. He was a top moral risk. His high ethical standards gave his bankers respect for him and his willingness to work. A poor moral risk may not receive credit assistance, even with liberal collateral, but a good moral risk will keep bankers from turning you down.

From his early years, Harry learned that good collateral was a help in all cases. He never mortgaged anything or was required to provide other collateral security to obtain credit to finance his livestock feeding operation. The bank knew he had integrity, know-how, and at least two-thirds of the feed needed. This meant his credit was minimum cost credit.

His comment on the service of credit was as follows: "As I look back now over some of those years of cheap and almost ruinous prices, it looks like I exhibited more nerve than good judgment in my business deals. It was necessary for me to use a lot of borrowed money for my operations. I sold fat hogs for \$3.25 and \$3.50 per hundredweight. This cured me from feeling that I was practically stealing shoats when I paid \$2.75 for them and 16 cents per bushel for corn."

Throughout the first 25 years of his struggle, his savings fund was mostly increased equity in good land, well cared for and well used. Ownership of good land seems to have been his goal in accumulating an estate and financing the operation of that farm. Harry told our class again, "I know something about land and how to make it produce income. So I think it wise that I put whatever savings I may realize into land as long as I need land."

Our extensive study of the records of Mr. Orr's operation has revealed no real extravagance. He loved good mules in work stock days and insisted on buying or rearing the best. (See photo of mare and offspring.) He liked easily worked, productive soil and insisted on keeping it that way. He and his family insisted on having a comfortable home and living surroundings of which they could be proud, but they have never put hard-earned capital into these things they like beyond good sound values. In 1954 Mr. Orr purchased the 94 acres adjacent to the farm, an area he had longed to own for many years. He paid \$295 per acre for it and paid cash. This may seem a high price for good Missouri land, but land no better than this at the time was selling in Illinois and Iowa for 50 to 100 percent more. Even this investment cannot be classed as an extravagance.

As we review this history of the Orr family's struggle to obtain adequate working capital, there is nothing unusual in the way they went about it. But their persistence and determination and the respect paid them in the community and at the bank must be the explanation for their experience of never having been denied credit for productive and well-managed operations.

Again referring to the analysis of the accounts for the years used in this study, it will be noted that the need for credit has multiplied in these forty years to a figure about three times as large as that required in 1919 (Table 11). The fact that this operator has been able to keep his credit rating so good that this increase was readily met by banking firms speaks for intelligent banking and farming. This is not to put the Orr credit achievement on a pedestal. Other examples can be cited. It does seem to emphasize the essential requirements for obtaining credit and some safeguards which neither credit agencies nor farm operators can afford to overlook.

Mr. Orr's feeling that the early development of

a high credit rating at banks is essential is expressed in his explanation of his unwillingness to carry a joint firm bank account with his partner. He states the case as follows:

“In making the contract with separate bank accounts I had two reasons for doing so. One was, the sooner Herbert (the partner) was forced to seek his own source of borrowed capital the sooner he would begin building up his own credit rating, which, if he ever expected to conduct a business with considerable volume, he would necessarily have to have. As

long as I signed the joint notes with him, legally the responsibility of paying those notes depended entirely on my already established credit rating. This could allow him to postpone establishing his credit.

“A lot of the worry and inconvenience is taken out of the borrowing business if the borrower is always sure some responsible person will always sign the note with him. Such isn’t good for a young man.

“Another reason for my policy was I wanted to be entirely free of the worry about being security for the other fellow’s obligations.”

Achieving Debt-Free Ownership of a Good Farm and Planning for Succession

This review of the progress of the Orr family would miss one of its major values if it did not call attention to two illustrations of how young people succeed their elders in acquiring the privilege of operating a good farm. Frequently nothing is done about transferring management responsibility to the young people until father and mother are gone. Then the estate must be settled and the claims of all heirs allowed. In the case of the Orr farm this meant that the one heir who wanted to continue in agriculture had to purchase the shares of the other heirs in the estate in order to keep the farm business intact as a going concern.

From Hired Worker to Partner

There is usually a time element involved from the day the successor reaches his majority and wants to participate as an entrepreneur in the operation of the property, until the parent can no longer maintain active direction and management of the business. For example, Harry Orr started as a hired worker for his father eight years before he took active charge of the business and before his father surrendered supervision of the property. He was admitted to partnership in operation of the business in 1904 and continued as a partner until his father passed away.

This was a better program than is followed on

a good many farms because it gave the son gradual responsibilities for several years before he was left solely responsible. Unlike many farms, this business was large enough to justify joint management. However, the procedure did not save Harry from the necessity of acquiring the other heirs’ interests in the property when the estate was settled.

Buys Family Shares

The four brothers and two sisters who chose not to claim their share of the land and operate it did agree to let Harry operate the property for a few years as a tenant, as had been done while his father was living. But soon their needs in their chosen vocations made it natural for them to want a cash settlement. Thus Harry had to purchase their shares in the farm at a time when he obviously had been unable to accumulate enough savings to make that purchase without incurring an additional, comparatively large debt.

In effect, he had to go into debt about six-sevenths or approximately 85 percent of the total value of the real estate. While he had accumulated what proved to be an adequate amount of operating capital, an 85 percent debt on the land was no small burden for him to shoulder at that time. Nevertheless, because of his early efforts and reputation for being thoroughly dependable and able to operate the

unit successfully, he was able to finance this 85 percent debt.

To students of the farm property and inheritance problem, this illustrates a possible shortcoming of our usual method of passing a farm business down to the next generation. It contrasts with the inheritance of other kinds of investments, many of which are held as shares or rights in a corporation or easily transferable claims to wealth which do not disturb the functional setup of a business.

Kept Business Intact

The way Harry and his brothers and sisters handled this problem is considerably better than the way in which such problems are sometimes handled. Frequently it involves the actual sale of the land and the disbursing of assets of the business. This leaves an heir, who may want to farm, the task of rebuilding completely from an oftentimes limited savings a new business property which frequently is inadequate and strange to him. Thus an excellent farm unit like the Orr farm may pass completely out of a family because of an heir's inability to finance the purchase of the shares of the other heirs.

This should give us considerable incentive to try to develop a mechanism something like the corporate structure. This "evil" which has long been referred to as "paying for the farm by each generation" becomes more sinister as we realize how important it is in present day agriculture to have a large amount of operating capital and continuity of operation.

Harry Orr and his wife worked from the day they were married in 1904 until 1942 to finally get the farm completely paid for. (See Chart.)

The next illustration is a more recent development and to most of us it is a more satisfactory solution to the problem of making a place for the rising generation to step into operation and eventual ownership of an adequately equipped and financed farm business. Mr. Orr is now 82 years old, as of 1957. Aside from the period of years from 1928 to 1935 he has been very active and fully able to manage the operation of his farm business. This period of inactivity was due to ulcers and some time spent in the hospital.

Beginning about 1950 Mr. Orr began to plan a program of having a young man succeed him to the active management of this property. He did not wish

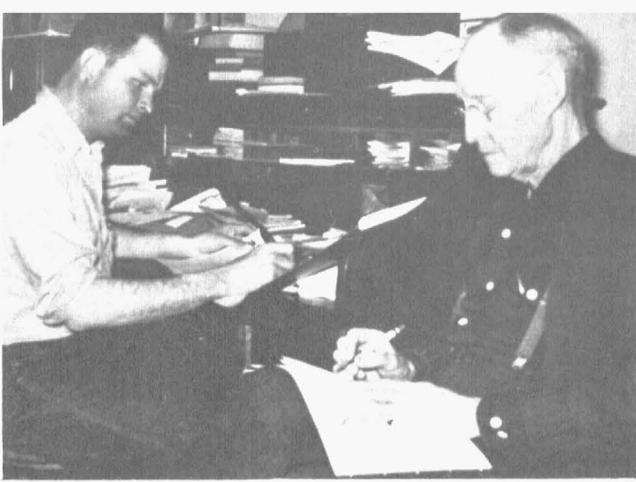
to relinquish management abruptly. He wanted to know his successor thoroughly, be certain that their associations would be congenial and that the successor would possess adequate capacity to handle a business which is conservatively inventoried at around \$200,000.

As indicated earlier, Mr. and Mrs. Orr do not have male succession, and the daughter, Mary Grace, though mentally highly capable would be seriously handicapped physically in assuming active responsibility for such a business. Consequently, he began to appraise the possibilities of young men whom he knew or whom he could contact who might fill this bill. He conferred with his bank and with other advisers, and screened many applicants. He finally invited a neighbor boy, Herbert Kiehl, to visit with him and talk over the possibilities.

Trial Period

Mr. Kiehl had grown up on his father's farm adjoining the Orr property and had some productive experience in this type of farm operation. He and Mr. Orr agreed that they would like to work together for a year at least and see how the relationship seemed to suit them. This they did. Mr. Orr hired Herbert on a wage basis so that the young man could become acquainted with the details of the farming setup and working with Mr. Orr. These two had known one another since Herbert was a small boy, but both realized that an acquaintance of that sort was not necessarily a guarantee that they would be congenial in working together. Both understood that while good workmanship, judgment, and dependability are essential, congenial relationships are also necessary. This they expected to learn while operating as employer-employee before entering into a formal partnership.

An examination of the details of this agreement in actual operation and the procedures which lead up to it furnish a functioning illustration of how it is possible to provide succession on a farm without disturbing what is obviously a very productive setup. It will be noted that there are some specific provisions in this arrangement that may differ from traditional relationships. This will likely be found in most any agreement between a retiring operator and a young person who is succeeding to the managerial responsibility for the estate.



Mr. Kiehl is the record keeper here after the end of the probation period.

One factor which may not be typical is that Mr. Kiehl had an accumulation of savings which made it possible to purchase a half interest in the operating capital assets involved in the farm business. With a business as large as this one, it will often be found that the young person taking over does not have that much available savings, so in this illustration the financing of the beginning of the partnership was less complicated than will often be the case. Frequently, it will be necessary for the retiring entrepreneur to underwrite on some basis or other the investment required of the beginning partner to make a 50-50 setup possible. This can be done without the assumption of unusual risk on the part of the owner of the property.

In Mr. Orr's case he had adequate operating capital represented in the livestock, equipment and supplies of all kinds. If Mr. Kiehl had not had sufficient capital to acquire a half interest in these, it would have been possible for Mr. Orr to accept the younger man's note for the amount required and secure the note with a chattel mortgage, if he considered it necessary to become that formal. In other words, the young party merely would have accepted the responsibility of paying his senior partner interest on a one-half interest in the operating capital as shown by the inventory. The animals and supplies would remain on the farm, sales and purchases would be conducted in the usual manner, and the junior partner's share of the earnings would be applied as a payment of this interest on the operating capital borrowed and used to retire the principal after living needs were met. Settlements at the end of the year could be made exactly as at present with the excep-

tion of interest due on the unpaid balance of the note. The fact that Mr. Kiehl had enough finances of his own saved these extra arrangements.

An additional and highly commendable change from traditional arrangements is the elimination of a joint bank account for the partnership. Mr. Orr and probably Mr. Kiehl preferred to avoid a joint-firm account. Neither party was empowered to write checks against the other person's balance.

The fact that purchases sometimes involve considerable sums has made it necessary for frequent adjusting of balances in the personal accounts of the two parties. If a sizeable purchase is to be made, they agree upon its desirability and then arrange at the bank for the individual making the purchase to give a check for the entire purchase price. When this check is cleared, the other party writes his check for half the amount.

On the sales side they also divide receipts from sales as soon as a sale is made. Every month the balances in the two accounts are compared with major sales and purchase adjustments made during the month and any additional adjustment indicated is covered by the issuing of a check from the one who's account has been overpaid to bring them back into balance. This necessitates a check on the operations every 30 days, and requires a very regular and systematic recording of purchases and sales with the result that accounts are kept up to date. It reduces materially the bookkeeping labor at the end of the year. This gives more flexibility and less chance for arguments to develop between partners concerning sales or cost sharing. The arrangements are highly commendable in that they do spell out in some detail the management procedures and procedures in case of negligence on the part of either party.

The safeguards which this program furnishes to a well-organized, going business concern and its achievement in implementing the financing of succession cannot be too strongly emphasized. The training through which the junior partner goes in seasoning himself to the requirements and responsibilities of a business with which he may not have been too well acquainted, and the maintenance of ample financing are significant contributions.

This places special emphasis on the importance of maintaining an effective farm business unit in case of disturbing developments such as the death or re-

tirement of operators and the installing of young men to succeed them. It avoids the tragedy of dissolution of well established firms and the disposal of herds and flocks which may have been years in building. It comes close to the corporate structure because it provides for continuing life of the business, avoids the necessity of refinancing the operating capital, and gives the young couple a fully established and financed business as they start. Thus the young couple has a maximum chance of owning the business before old age overtakes them.

Mr. Orr provided a remodeled and modern house for his prospective partner in farming operations along with garden space, milk, meat and poultry products. At the present time, even the laborer's cottage has all modern conveniences.

Mutual discussion of the problem and objectives seemed to satisfy both parties. Consequently, in 1951

they drafted and approved a farm lease agreement and began operating as a landlord-tenant firm in 1952, under what is approximately a fifty-fifty arrangement. They have generously furnished an exact copy of this agreement for this report. This agreement was developed to suit their special circumstances and wishes, but is deemed of such merit that it may be usable by others under similar circumstances, with minor modifications to fit special conditions.

In preparation for this unloading of management responsibility, Mr. Orr consulted his banker, his brother (the attorney) and his research friends in the Experiment Station. From all these discussions, he finally drafted the details of the agreement. Six years of experience under the lease seem to have demonstrated its adequacy. Both parties seem highly satisfied with the results.

LIVESTOCK-SHARE FARM LEASE ON THE ORR FARM

THIS LEASE, made and entered into this 1st day of January, 1952, by and between A. H. Orr, hereinafter referred to as Landlord, and Herbert Kiehl, hereinafter referred to as Tenant WITNESSETH:

That WHEREAS the Landlord is the owner of the following described real estate situated in Saline County, Missouri, consisting of 449 acres and commonly known as the A. H. Orr Farm, to-wit:

447½ acres more or less in Sections 16 and 17, Township 50, Range 22, Saline County, Missouri, together with all farm machinery, tools and equipment, cattle, hogs, horses, cows, fertilizer, grain, hay and silage now located on said farm and shown by Landlord's inventory of December 31, 1951, and

WHEREAS, Tenant is desirous of renting said farm from Landlord for a term of one year from January 1, 1952 to February 28, 1953* and from year to year thereafter unless written notice to terminate the same is given by either party to the other at least ninety (90) days prior to the beginning of the succeeding lease year, and

WHEREAS, Tenant is further desirous of purchasing from Landlord an undivided one-half (½) interest in all of said farm machinery, tools and equipment, cattle, hogs, horses, cows, fertilizer, grain, hay and silage, now located on said farm and shown by Landlord's inventory of December 31, 1951, at and for the price as set out for each of said items in said Landlord's inventory of December 31, 1951, and to operate said farm on a partnership basis, and

*Actually 14 months for the first period to allow the farm year to begin March 1.

WHEREAS, Landlord has agreed to sell to Tenant and by these presents does sell to Tenant an undivided one-half ($\frac{1}{2}$) interest in all of said farm machinery, tools and equipment, cattle, hogs, horses, cows, fertilizer, grain, hay and silage, now located on said farm and shown by Landlord's inventory of December 31, 1951, at and for the price as set out for each of said items in said Landlord's inventory of December 31, 1951, and has further agreed to lease to Tenant and by these presents does lease to Tenant said farm except Landlord's residence, garage and poultry house for a term of one year from January 1, 1952 to February 28, 1953* on a partnership basis as hereinafter set out.

IT IS THEREFORE MUTUALLY AGREED by and between the parties hereto as follows:

Tenure and Extent of Agreement

The term of this lease shall be for a period of one year from January 1, 1952, to February 28, 1953,* and from year to year thereafter unless written notice to terminate the same is given by either party to the other party at least ninety (90) days prior to the beginning of the succeeding lease year and the terms of said lease shall be binding upon the heirs, executors, administrators and assigns of both Landlord and Tenant. Tenant shall not have the right to assign this lease or any portion thereof without the written consent of Landlord.

Inventories

At the close of each year during the life of this lease Landlord and Tenant shall cause to be taken a complete inventory of all property jointly owned by them. Said inventory to be used as the basis of income tax reports and all other matters involving the value of jointly owned property.

Disposition of Property and Arbitration at Expiration of Lease

In the event of the cancellation of the within lease by Tenant, it is agreed that Tenant shall first offer to Landlord his one-half ($\frac{1}{2}$) interest in the property jointly owned by the parties hereto at the inventoried price as shown at the time of the cancellation of the within lease by Tenant. The parties hereto agree that if a proper settlement cannot be reached between them at the termination of the within lease or if Tenant should fail to carry out substantially the terms of the lease or if death, physical, mental or financial incapacity should prevent him from doing so, or if any other situation should arise which makes it impossible for him to do so, that Landlord may serve written notice upon Tenant of Tenant's failure to fulfill the terms of the within rental agreement. Within ten (10) days after such services each party shall select an arbitrator and then the two arbitrators so selected shall select a third and the three shall make an inspection of the farm and report their findings in writing to both Landlord and Tenant. If Tenant fails to select an arbitrator within said ten (10) days time or if the arbitrators report serious damage has been caused or will result to growing crops or to the farm, then Landlord shall have the right to re-enter and take full possession of the farm and buildings and Tenant agrees to vacate peaceably without claim for damages. Landlord shall do what is necessary and reasonable to carry out properly the contract of Tenant or to repair the damage and to that end Landlord may do all the labor and furnish all the machinery, materials and equipment necessary to carry out the contract of the Tenant and charge the cost of such operations or the amount of such damage or both to Tenant, and the amount of such charge to be a prior lien on the Tenant's share of the crops and livestock. The expense for a reasonable compensation for the arbitra-

*Actually 14 months for the first period to allow the farm year to begin March 1.

tion committee shall be borne equally by Landlord and Tenant. At the expiration of the within lease Tenant agrees to pay the Landlord a reasonable compensation for any damage to the property not herein provided for and for which Tenant is clearly responsible after due allowance is made for damage resulting from ordinary wear and depreciation and from causes beyond Tenant's control.

Residence For Tenant

Landlord agrees to furnish Tenant a modern three-room house in which to live. Said house to be equipped with electricity, running water and natural gas for heating. Tenant agrees to pay for all gas and electricity used by him. There being no separate meter for gas in the house to be occupied by Tenant and since said house is connected by an extension of the gas line from the house of Landlord, Tenant agrees to pay as his share of the cost of all gas used in excess of the average monthly cost as paid by Landlord for the years 1946-50 inclusive, before Tenant's house was connected by extension of gas line from Landlord's house. Landlord further agrees that he will at his own expense add additional rooms to said house if at the end of three (3) years Tenant finds that the same is too small for his needs. Landlord further agrees to allow Tenant to have use of one other small house on the farm for Tenant's hired help.

Agreement for Operation of Farm

Landlord and Tenant agree to operate farm covered by within lease, Landlord furnishing the farm and Tenant furnishing all labor to operate the same. All farm machinery, tools and equipment, cattle, hogs, horses, cows, fertilizer, grain, hay and silage shall be jointly owned. The proceeds from the sale of all said jointly owned personal property shall be divided as received on a 50-50 basis and placed to the credit of each party in the bank in which said party carries an account. The buying and selling of jointly owned materials, livestock, grain and other farm produce shall be left with the Tenant but shall be made only with the knowledge and consent of Landlord. Landlord and Tenant shall decide each year whether to enter into Government programs designed to aid agriculture. All Government payments shall be shared equally by and between Landlord and Tenant. Landlord and Tenant shall each have the authority to pay by personal check for any property that is to be jointly owned. At the end of each month Landlord and Tenant shall meet and present cancelled checks and receipts for any sums so expended by him and adjust such payments. If during any month either Landlord or Tenant shall personally issue checks for jointly owned property in excess of \$1,000.00, the other party shall immediately re-imburse the other party therefor. Landlord and Tenant shall agree upon what livestock shall be sold, the approximate time at which it will be sold and the selling agent. Landlord and Tenant shall agree upon the number and kind of livestock that shall be purchased and the time of purchase. Landlord and Tenant agree that ninety (90) days before the starting of the following year's lease should the same be extended that they will determine the number of acres in the farm to be left for permanent pasture for the succeeding year, the number of acres which shall be planted to grain and legumes, the kind of legumes to be planted and the disposition to be made of the same. Tenant in addition to keeping a strict financial record of said farm operation, shall also keep an annual inventory of equipment and personal property which shall be used by Landlord and Tenant as a basis for studying the farm business and for making settlements. Since it takes eight (8) years for the soil to use up the entire benefit of rock phosphate and lime, it is

agreed by both parties to this agreement that upon the termination of the same, Landlord shall compensate Tenant by paying him for his pro-rata part of the unused benefits of the rock phosphate and lime that has been jointly put on the farm after January 1, 1952. Said payments to be figured at the original cost of the lime and rock phosphate when it was applied.

Landlord's Expenses

Landlord, in addition to furnishing afore described farm, including the improvements thereon, agrees to furnish and pay for all material necessary for repairs and improvements to the buildings, fences and other structures on said farm, including waterways and drainage structures; to furnish and pay for all skilled labor employed in making permanent improvements; to pay all State and County real estate taxes on said farm and to keep insurance in force on all improvements.

Tenant's Expenses and Duties in Operating Farm

Tenant agrees to furnish all labor required to operate the farm in a satisfactory manner; to keep in repair all fences, buildings and other structures; to do all hauling to the farm except when otherwise agreed all material which the Landlord furnishes for repairs and minor improvements; to faithfully cultivate said farm in a timely, thorough and businesslike manner; to take proper care of all trees, vines and shrubs and prevent injury to same; to haul, use and spread all manure as practicable on fields agreed upon by the parties hereto; to keep the buildings, fences and other improvements on said farm in as good repair and condition as they are when he takes possession or in as good repair and condition as they may be put by the Landlord during the term of the within lease, ordinary wear, loss by fire or unavoidable destruction excepted; to cut large hedges and make into posts, burn the brush therefrom and apply chemicals to kill the hedges and rebuild fences where hedges are cut; to not allow noxious weeds to go to seed on said premises and to destroy same and keep weeds and grass cut on lots adjoining the land and in the fence rows; to not burn corn stalks, straw or other crop residues grown on the farm except by permission of landlord and to leave or spread upon the land and in no case to remove the same from the farm without the consent of Landlord; to prevent tramping of fields by stock and rooting by hogs where damage to the land will be done; to not pasture new seedings or legumes or grasses in the year they are seeded except with the consent of Landlord; to keep open ditches, tile drains, tile outlets, grass waterways and terraces in good repair and to construct new terraces except where skilled labor and heavier machinery is required in which case the expense therefor shall be shared equally by Landlord and Tenant; to not break up, established water courses or ditches or undertake any other operations that will injure the land; to prevent all unnecessary waste, loss or damage to the property of Landlord; to allow no stock other than the stock of Landlord and Tenant on stalk fields, stubble or grass fields without the consent of Landlord; to inoculate all legume seed sown on land not known to be thoroughly inoculated by the crop planted; to follow standard disease treatment for all seeds sown on the farm and to follow standard treatment for eradicating injurious insects whenever necessity so demands; to farm no additional land and enter into no other business occupation or sideline unless it be with the approval of Landlord.

Expenses To Be Shared Jointly Between Landlord and Tenant

The cost of all the machinery repairs and replacements shall be shared equally by Landlord and Tenant together with the cost of all livestock, seeds, inoculations, disease treatment, material and

fertilizer acquired for use in the operation of the farm. Landlord and Tenant shall share equally in the payment of insurance and taxes on all personal property jointly owned. The cost of fuel for tractors and fuel for one automobile for each of the parties hereto together with the farm's share of electricity consumed in operating the farm shall be shared jointly by the parties hereto. Additional machinery and transport hire required for the operation of the farm shall also be shared jointly. Landlord and Tenant shall each be entitled to a garden, fruit, milk, poultry and eggs for family use only. Produce beyond this amount shall be considered as other farm products sold and the proceeds realized from the sale of the same shall be treated in the same manner as other sales realized from the operation of the farm. Each of the parties hereto shall have the right to butcher as many of the hogs jointly owned as shall be needed for the use of the family, said hogs shall be weighed by him and he shall pay the other party for one-half (1/2) of the value of such hogs as butchered at the market price.

Division of Farm Income

Landlord and Tenant agree that all profits and losses from the operation of said farm shall be shared equally by the parties hereto and that the receipts from the sale of all livestock, hay, grain and other commodities produced on the farm and sold shall be placed one-half (1/2) to the credit of the Landlord in the bank designated by him and one-half (1/2) to the credit of the Tenant in the bank designated by him.

IN WITNESS WHEREOF, THE PARTIES HERETO HAVE SET THEIR HANDS TO
Two copies thereof, both originals, the day and year first above written.

Landlord

Tenant

The lease reported here in full and actually in use by Mr. Orr and his partner, Mr. Kiehl, does not specify what shall happen to the land and the capital represented therein, but it is Mr. Orr's hope that Mr. Kiehl would continue the operation and management of the firm should Mr. Orr pass on and leave Mrs. Orr and daughter, Mary Grace, with the farm on their hands. The intention is that while they live, Mary Grace and her mother will retain

ownership of at least a part of the property and their half of the operating capital, furnish their share of the expenses and receive a partner's share of the earnings. In discussing this problem recently Mr. Orr stated that he hoped Mr. Kiehl would be able to purchase a considerable portion of the farm from his earnings, but so long as either Mrs. Orr or Mary Grace live, to continue operating the entire unit as a partnership.

A Master Farmer Reveals His Philosophy of Rural Living

The first and perhaps the most important point of view which the Orr family has always held is that successful operation of a farm from an economic point of view is a necessary objective but is not the major objective in life. The end product is a better living for the farm family. Better living is in part the result of the income derived from the farm, but that is not all.

The history of the Orr family shows that improvement of the community in which the family lives is an essential part of their objective. We see in Mr. Orr an aggressive and natural leader for his community. He can identify things that would improve the community and can convince neighbors that they are worth working for. Neighbors follow his leadership and achieve results which would be beyond their capacity without that leadership. The fact that seldom are farms for sale in that community, except to settle estates and bring desired adjustments between heirs, should be the most forceful evidence we could ask that people of this community like the attitude and achievement which has given them a happy community life.

This could end our interpretation of Mr. Orr's philosophy but it is only a summary statement. As we study the career of Mr. and Mrs. Orr and Mary Grace we are obliged to note the means they have used in bringing about this desirable home and community situation. First of all, they have not allowed limited financial means to deter them in their efforts to achieve the kind of a community in which they wish to live. Both Mr. Orr's and Mrs. Orr's parents were working in this direction when the present Mr. and Mrs. Orr were children. So they lived under that set of ideals throughout their youth. Therefore, it is perfectly natural that they carry on, using this background of experience which no doubt has made their own efforts more productive.

Mr. Orr's parents before him were widely known as neighborly people. They were always ready to give time and energy to community activities that

were for the betterment of people. They had joined with others in establishing the little cemetery on the northwest corner of the Orr farm, and were identified with other community and county movements to promote improvements and a spirit of friendliness among people of the area.

Harry grew up in this atmosphere and naturally carried on after the death of his father. He was instrumental in the organization of a perpetual care movement for the cemetery. He helped persuade his neighbors to join in the movement to secure a county agent. A year or so afterward, he participated in the research work of his State Experiment Station designed to study the importance of ample capital in improving farm incomes in Saline and Lafayette counties.¹

A little later he joined with other cattle feeders in the area in cooperating with the State Experiment Station and the United States Department of Agriculture in a five-year study of the cost of producing beef on grass.² Four other corn belt states were associated in this study. In 1916 he began cooperation with his State College of Agriculture in the use of his farm and farm records as a laboratory for farm management students. This service has continued to the present day.

He was active in his church from boyhood on, and has served for over fifty years as an elder in that church.

The Missouri Farm Bureau was born at Slater, in Saline County, and Harry Orr was one of those actively participating in the organization meeting. For over 20 years he served as president of his County Farm Bureau. Mrs. Orr was president of the Home Makers Club of the Farm Bureau for a quarter of a century.

The Orrs promoted a bond election for gravel roads in the Saline County area long before the farm-to-market program was inaugurated, finally following this with an organized move to obtain Route EE from Highway 40 north toward Malta Bend and

¹Missouri Experiment Station Bulletin No. 175, 1920.

²U.S.D.A. Technical Bulletin 23, December, 1927.

through the Orr neighborhood.

Single handed, Harry succeeded in persuading the "Alton" Railway people to create a flag stop of their local passenger train at the Salt Springs road crossing (now Route EE), before the day of all-weather roads and automobiles, so people in the community could go to Kansas City and return home the same day. At that time this was a real convenience to folks of the neighborhood.

In 1928 he helped persuade the Kansas City Power and Light Company to build a power line to the farms of that area. This was long before the R.E.A. was even dreamed of. This meant electricity on the Orr farm 15 or 20 years before electric co-ops were set up for such service.

Along with community improvement we must not omit the farm home of Mr. and Mrs. Orr. Mrs. Orr was probably one of the first open country women in Saline County to have a really modern home, made possible by effective farm management and the conviction that a farm home can have all the conveniences of a city home.

The Orrs had the feeling that broad public contacts and observation made more useful and happy citizens. Consequently they traveled widely, seeking new and usable ideas and programs for their community and their farm. Field days, forums, and short courses for farm folks were important sources of their inspiration and improvements.

Recognition of ability to get things done caused Mr. Orr to be named chairman of the committee on local arrangements for the National Corn Husking contest of 1937, held in Saline County. This job involved providing for an attendance of 100,000 persons from all over the United States. The job was done without a hitch.

For two years (1917 and 1918) he was the recipient of a Master Farmer Award made by the Mississippi Valley Trust Company of St. Louis for his farming and citizenship achievement.

Recently Mr. Orr was cited by the Missouri Chapter of the National Agricultural Honor Society, Gamma Sigma Delta, for his contribution to agriculture and rural living.

Mr. and Mrs. Orr have always been hard to discourage. No discouragement has ever kept them from trying to achieve their objective. When we review examples of failure to surmount difficulties no



Mr. Orr is still proud of his State Farm Bureau, which he helped organize at Slater, Mo., in 1915.

Mr. Orr received the Master Farmer plaque awarded by the Mississippi Valley Trust Company in 1918 and 1919.



greater than confronted these two people, we can only conclude that optimism and determination have been important attributes in working their way to a most happy way of life. In Mr. Orr's own words, "During our years on the farm we have never been niggardly in our living. We have taken numerous trips from year to year by train, auto and airplane. We have been among the first to adopt mechanized appliances both inside as well as outside of the house. Unconsciously we have followed the rule of 'Be not the first by whom the new is tried, nor yet the last to lay the old aside.'" Living up to this has undoubtedly made a pleasant farm home and community atmosphere around the Orr farm.

Even in the roughest times Mr. Orr has not permitted himself to exploit either human or physical resources. He has taken good care of his family, his employees and their families and his farm. We can add that he has done more than his share to see that his community has been well taken care of. We have also indicated that he gives generously of his time and experience in helping train young people to become successful farm operators or to live successfully in whatever field they may be asked to serve.

Perhaps the greatest value which our students and their teachers have received from contact with and study of the Orr program for farming and living was received when we sat down with Mr. Orr after our detailed inspection of his farm and the record to question him and listen to the thinking of a master farmer.

Provide Dinner for Classes

When we would come into the farmstead from a trip over the land, frequently on hot spring or summer days, Mr. Orr would send the entire class to the basement to "clean up" before Mrs. Orr and her neighbors served us a lavish dinner. In the basement, the first thing we noted was a stack of bath towels high enough to give one bath towel to each student and teacher. There was plenty of soap and a good shower bath.

After the shower and perhaps a few moments standing around the yard talking about what we had seen, the ladies would call us in to dinner. Mr. Orr and his workmen would join us at the dinner table while Mrs. Orr and her Home Makers Club, Church Circle, or tenants' wives would set before us a dinner only farm folks provide.

Question-Answer Period

When the dinner was over we would help the ladies get the tables cleared, then, if the weather was comfortable, we would adjourn to the front yard where Mr. Orr, sitting on the ground with the rest of us with his back against a shade tree, would say "All right now, boys, what are your questions?" For about two hours we would be quizzing and discussing the various impressions and ideas gleaned from our field trip. Mr. Orr would tell us to begin with, "Now ask any questions you wish and I will try to answer them if I can." Typical questions might be like these:

"Mr. Orr, I note that you seem to have two different grades of cattle on the farm. Why do you do this?"

Mr. Orr's answer in substance would be as follows: "Well, boys, I have observed in studying the cattle market that sometimes the most profitable grade of cattle to handle is those that will finish choice or prime when they are ready for market. At other times I can make more money with the common grade (good or commercial). Consequently, I think it wise to have some of both. In any one year, I have never seen the price of both classes low at the same time. I don't usually produce prime cattle but I intend to have about half of my sales each year of at least choice grade. I don't intend to handle any calf that I can't make a little money on. But I will tell you that I have sometimes made more money on commercial or good grades than I have on choice and prime. If you watch the economic reports from the Extension Service, the Department of Agriculture, and the market sheets, you will find indications that there will be a heavy or maybe a lighter supply of one of these grades relative to the other. I always watch for these reports and try to have available for market the grade which has been reported in shorter supply."

"Mr. Orr, you seem to be very successful in growing good alfalfa on your land. You must think this is about the best hay crop you can grow. Doesn't it conflict in labor with your corn?"

"You have asked two questions in one breath. I will try to answer both of them. In the first place, I have been growing alfalfa on this soil a good many years. I note that you and your teacher have been digging holes over the farm and you probably have

found that the top soil here is fairly deep. This I have found to be a good alfalfa soil. I have had very little trouble keeping a good field of alfalfa.

"You are correct in thinking that there is a little conflict between producing corn and alfalfa; but if I have plenty of horse power, I can usually get my corn cultivated in between my first alfalfa cutting and small grain harvest, if I don't let the cattle harvest the small grain. With modern equipment and power this conflict is not serious."

From a student in an earlier class: "Mr. Orr, I note that you work mostly mules. Don't you like work horses?"

Mr. Orr: "Yes, I like work horses, but work mules are to me a little more satisfactory, especially with hired labor. My workmen are good workmen and conscientious, but it is not so easy for them to hurt a mule as it is to hurt a horse by overwork. I like mules."

"Mr. Orr, you told us that your brother is a practicing lawyer in Kansas City and that he once worked with you here at the farm. Which one of

you has done the best since your brother went into the law field?"

Mr. Orr smiled and handled this rather inappropriate question in a very nice way. He said, "Well, I don't know that I can answer that, except to say that my brother has gotten along all right in the law field. Personally, I like the farm."

These are examples of questions and discussion that usually covered something like a two-hour session before we concluded that we had better get started back home. From the Orr farm to the College it is about an hour and a half drive. We can't be too sure but the impression was always there that the class felt these visits were a most profitable study of how one farmer applied what they were learning in farm management.

One year there were seventeen county agents in summer school that had the privilege of this study session with Mr. Orr. These men who had been out in service several years since graduation expressed a high regard for the value of such contacts. This gives us confidence that this type of work is worthwhile.

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A recorder and interpreter of events that have occurred over a period of nearly half a century cannot but incur obligations to many persons who participated in those developments. All such obligations must be acknowledged and well-earned credit is gratefully given.

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