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W. F. HANDSCHIN, VICE-DIRECTOR

URBANA, ILLINOIS

THE USE OF FARM LABOR DURING THE WAR

BY W. F. HANDSCHIN[1] AND J. B. ANDREWS[2]

The war has brought to our farmers an increased demand for food and a decreased supply of labor. Under these conditions it seems plain that if food production is to be maintained or increased, there must be a considerable change in the methods of production on the majority of our farms.

The suggestions made in this circular are based mainly upon the following sources of information: first, upon detailed cost-accounting studies made during the past five years on some twenty to twenty-five farms located in various parts of the state;[3] second, upon general accounts kept on approximately four hundred farms in ten counties in northern and central Illinois during the past two to three years; and third, upon a considerable amount of first-hand experience, by the authors, in handling farm labor in several middle western states. The suggestions are offered in the hope that they may, in a measure, help to meet the labor problems that confront our farmers. Unless we can solve these problems reasonably well, we shall not be able to feed ourselves and our allies in 1919, to say nothing of 1920 and later, should the war continue that long.

To any one who knows anything of farmers and farm life, it is useless to suggest that farmers work harder. The majority of farmers are already working up to the limit of their ability, at least during all of the cropping season. The only hope of meeting the demand for increased food production, so far as labor is concerned, must come thru the better utilization of the labor at hand. It is now almost certain that such labor will be reduced either in amount or in

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[1]Assistant Professor of Farm Organization and Management.
[2]Instructor in Farm Organization and Management.
[3]These studies were carried on by the Animal Husbandry Department in its investigations of systems of live-stock farming during the years 1913 to 1916 inclusive.

quality, or more likely in both, during the period of the war. In view of these facts it seems plain that the situation at best will be very difficult. It is therefore all the more important that we make every possible effort to solve the labor problem in so far as we can.

In increasing the efficiency of the labor we have, the following factors will probably be the most important:

The more even distribution of labor thruout the growing season by means of a good rotation of crops

The equipping of every laborer with enough horse power and with the size and type of machinery that will enable him to do the greatest possible amount of work

The planning of all the farm work so that every operation that is not definitely fixed as to time or season may be fitted in between the busiest, or "peak-load" periods, when every minute may be of special importance in producing or saving a crop

The practice of letting live stock harvest crops and feed themselves in so far as is practicable

The use of a careful follow-up system to help in planning and executing the work from week to week and from day to day

In any plan to make the best use of labor, no one of the factors mentioned is likely to entirely solve the problem. Each one, however, will help use labor to somewhat better advantage, and the combined effect of several or all of the six factors will certainly go a long way toward getting the necessary work done with the labor at hand.

Plan a Good Rotation.—A very large part of the man labor necessary in the production of farm crops is used during relatively short periods. For example, much of the labor required in producing a corn crop is used during a period of about two months, from May 1 to July 1, approximately. The major part of the labor necessary for most other farm crops is used over still shorter periods. Most of the labor they require is used during a period of from ten to fifteen days at planting time and a similar period during harvest. For different crops, however, the "peak-load" of labor comes at different times. If, then, crops can be selected which will spread the labor needed as evenly as possible thruout the growing season, instead of piling it up for short periods, the labor available can be better used; or stated in another way, one man can grow more acres of crop, or a given number of crop acres can be handled by a lesser number of men, which is the chief aim during the period of the war.

Grow Wheat and Rye.—Corn is in general our most profitable crop and produces relatively larger amounts of food per acre than most crops grown in this section. We shall therefore not likely want to greatly reduce our corn acreage. Less than 5 percent of the corn crop is consumed directly by people, however, and only a small portion of it can be so consumed as long as we produce from 25 to 30 bushels per capita. From the standpoint of producing food crops that are consumed directly by people in any large way, wheat is far

more efficient in the use of land than any other of the crops common to the corn belt. For this reason wheat should be grown at least to a reasonable extent in all sections where soil and climate are at all well adapted to its production. In the corn belt this means largely winter wheat. Fortunately this crop is one of the best fitted to help in the more even distribution of labor. Preparing the ground and seeding does not conflict to any great extent with other important crop work, and harvesting usually comes when corn cultivation is fairly well along. The same is also true of rye, which is better adapted to some sections than wheat.

Many corn-belt counties normally grow from 50 to 65 percent of their improved acreage in corn and from 20 to 25 percent in oats. In these counties wheat or rye should make up from 10 to 20 percent of the improved area, from the standpoint both of the use of farm labor and of the production of food for human consumption. These crops should replace oats mainly, but also corn to some extent, especially where the latter occupies more than 50 percent of the improved acreage.

Grow More Legumes.—The proportion of legume crops, such as medium red, alsike, and sweet clover, and alfalfa, needs also to be considerably increased in many corn-belt counties, first from the standpoint of maintaining soil fertility, and second from the standpoint of a better distribution of labor. Many Illinois counties still have from 75 to 85 percent of their improved area in corn and oats, with less than ten percent in legumes. A fairly good rule in planning a rotation for our best corn-growing sections is, 40 to 50 percent in corn, 20 to 25 percent in small grain, and 20 to 25 percent in legumes. Unless especially heavy-producing legumes are grown, the rotation must include at least 20 to 25 percent of some legume if the nitrogen content of the soil is to be kept up.

The accompanying charts showing the distribution of man labor for different crops indicate how various crops may be selected in order to distribute more evenly the man labor.[1]

Use Enough Horse Power; Work Horses in Shifts.—It seems now that the supply of labor will determine to a large extent how much food we can produce during the war. Every laborer, therefore, should be provided with as much horse power as he can use to good advantage, especially during the period when the crops are being put in—that is, from about April 1 to May 15. This is the period which taxes farm horse power to the limit. It is seldom that any other period, except occasionally that of fall plowing, demands really the maximum use of the horse power at hand.

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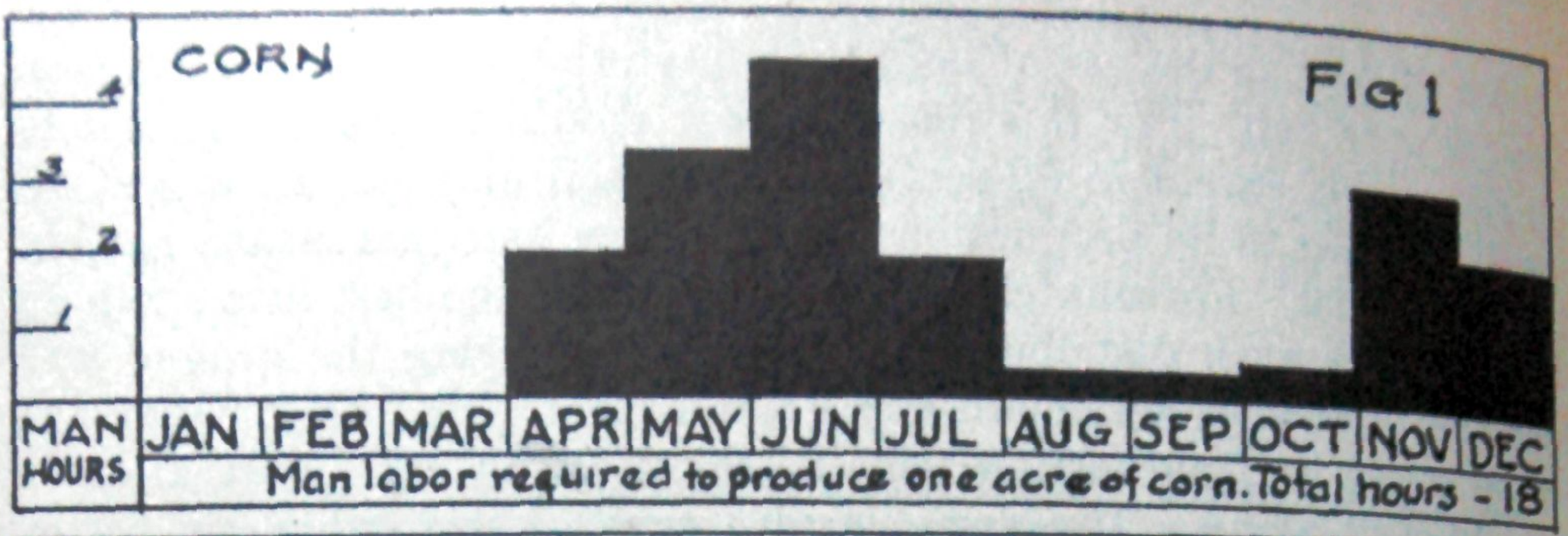
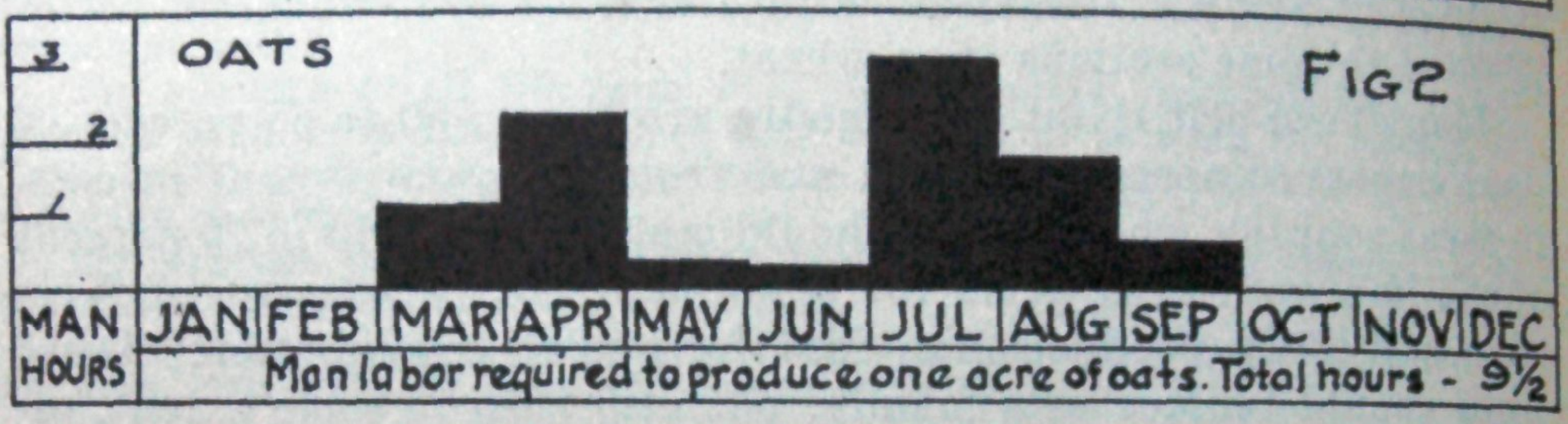
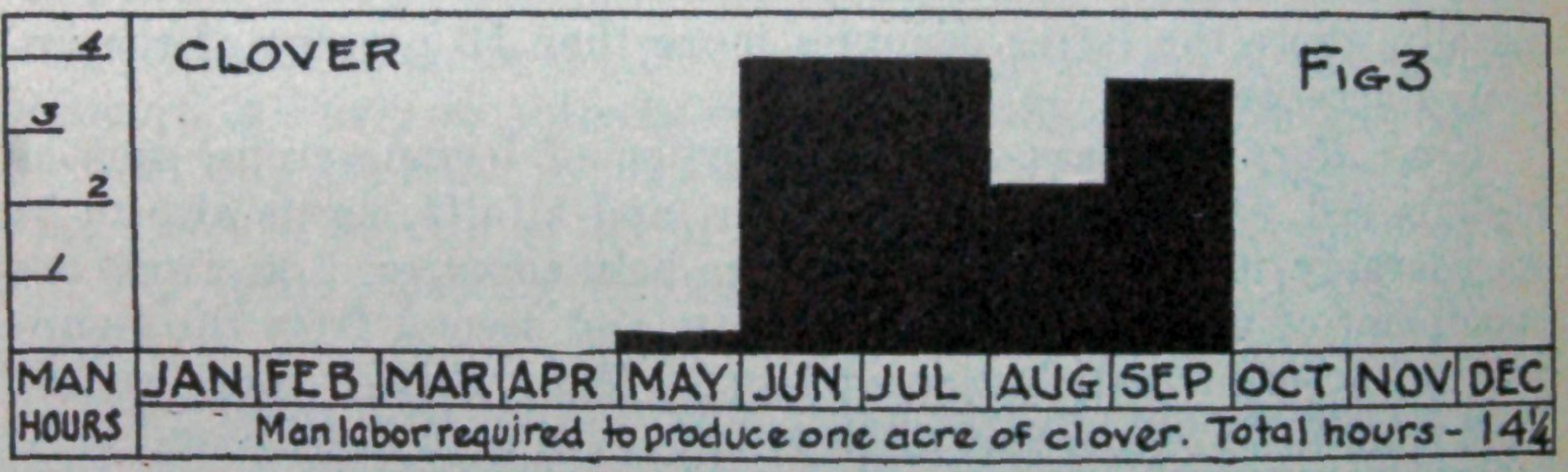
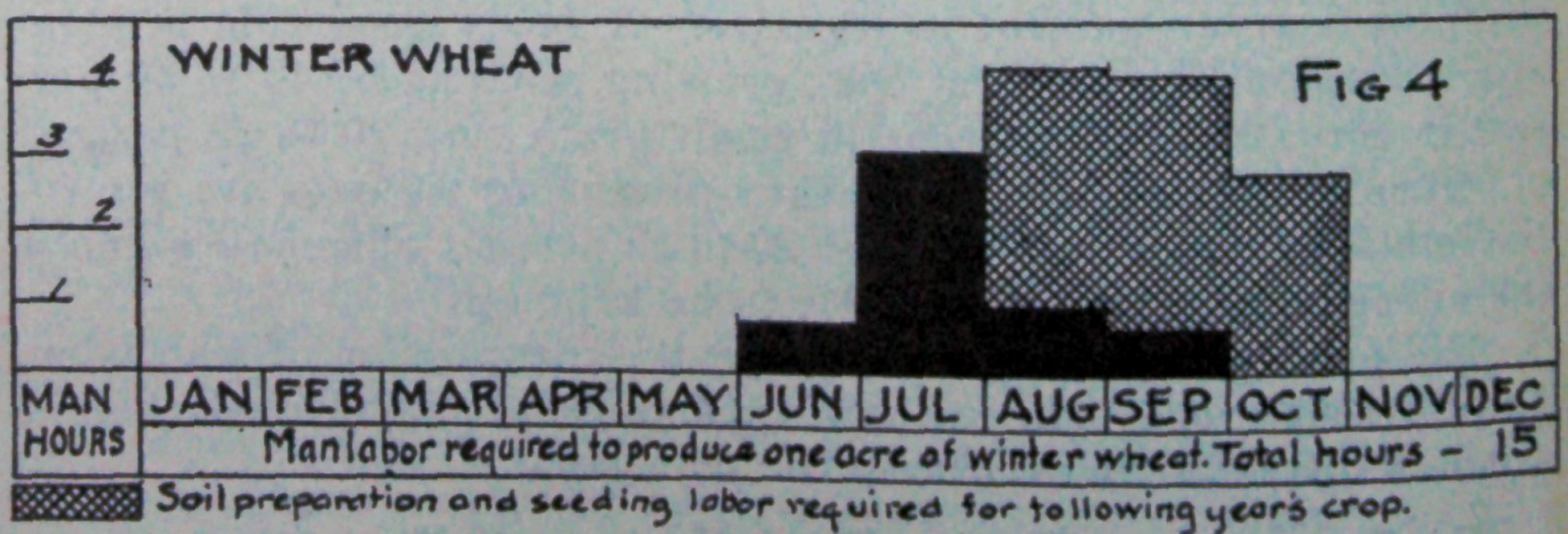
[1]When these distributions of man labor are studies in connection with the distributions of horse labor for these crops, the importance of a good rotation of crops is still further emphasized.









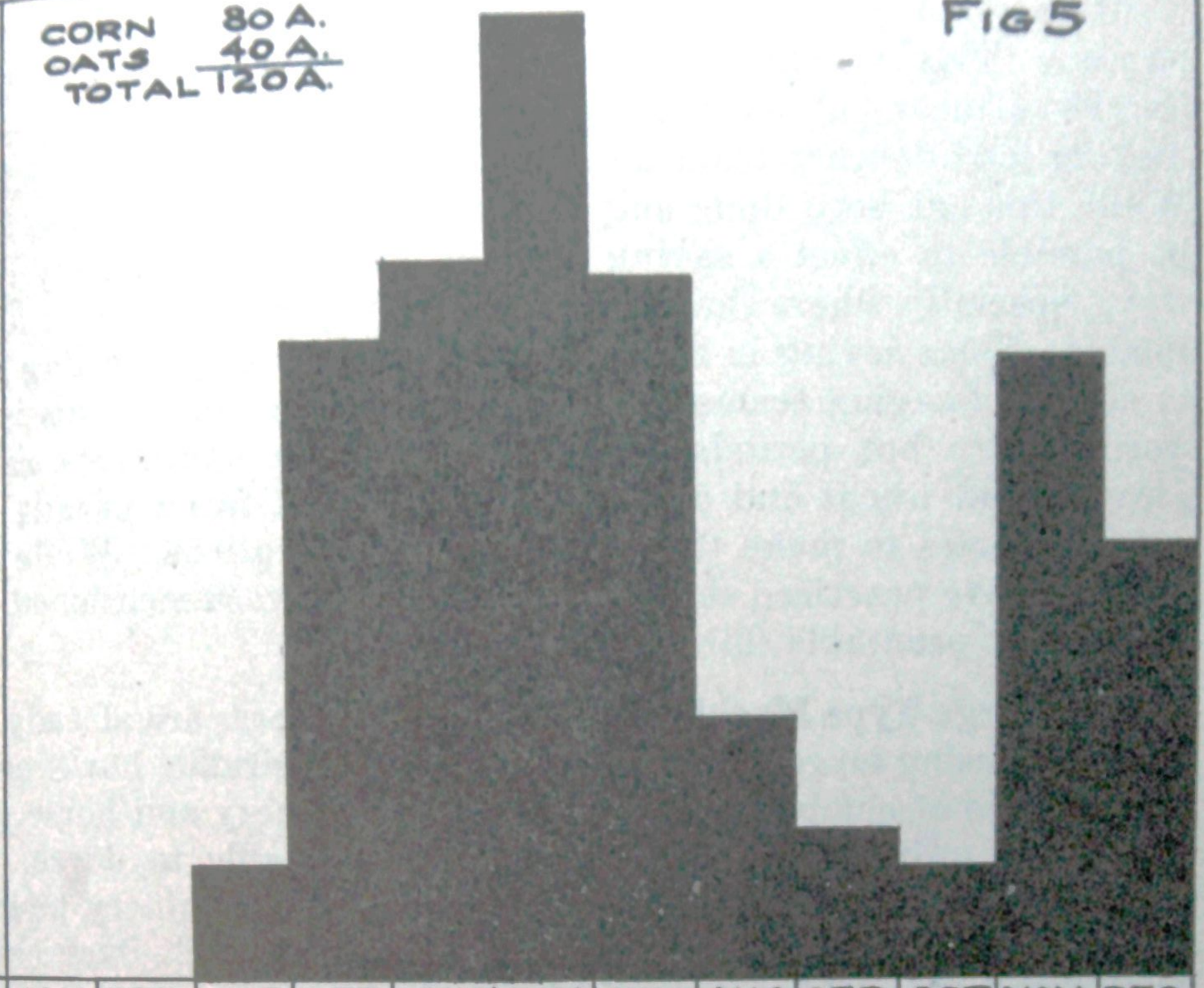
FIGS. 1-4.—Number and distribution of man hours, by months, used in producing four common corn-belt crops. The clover crops shown include second crops harvested for seed. This somewhat increases the man labor used on these crops. If no second crop were harvested, or if a part of the crop were pastured, the man labor used would be considerably reduced.

FIG. 5.—Poor distribution of man labor resulting from the common corn-belt rotation consisting of two years of corn followed by one year of oats.

FIG. 6.—Distribution of man labor in growing a rotation of two years of corn, one year of oats, one year of clover, and one year of wheat. The "peak-load," or highest labor requirement, is considerably less than for the rotation shown in Fig. 5, and the distribution thruout the season is considerably better.

FIG 5

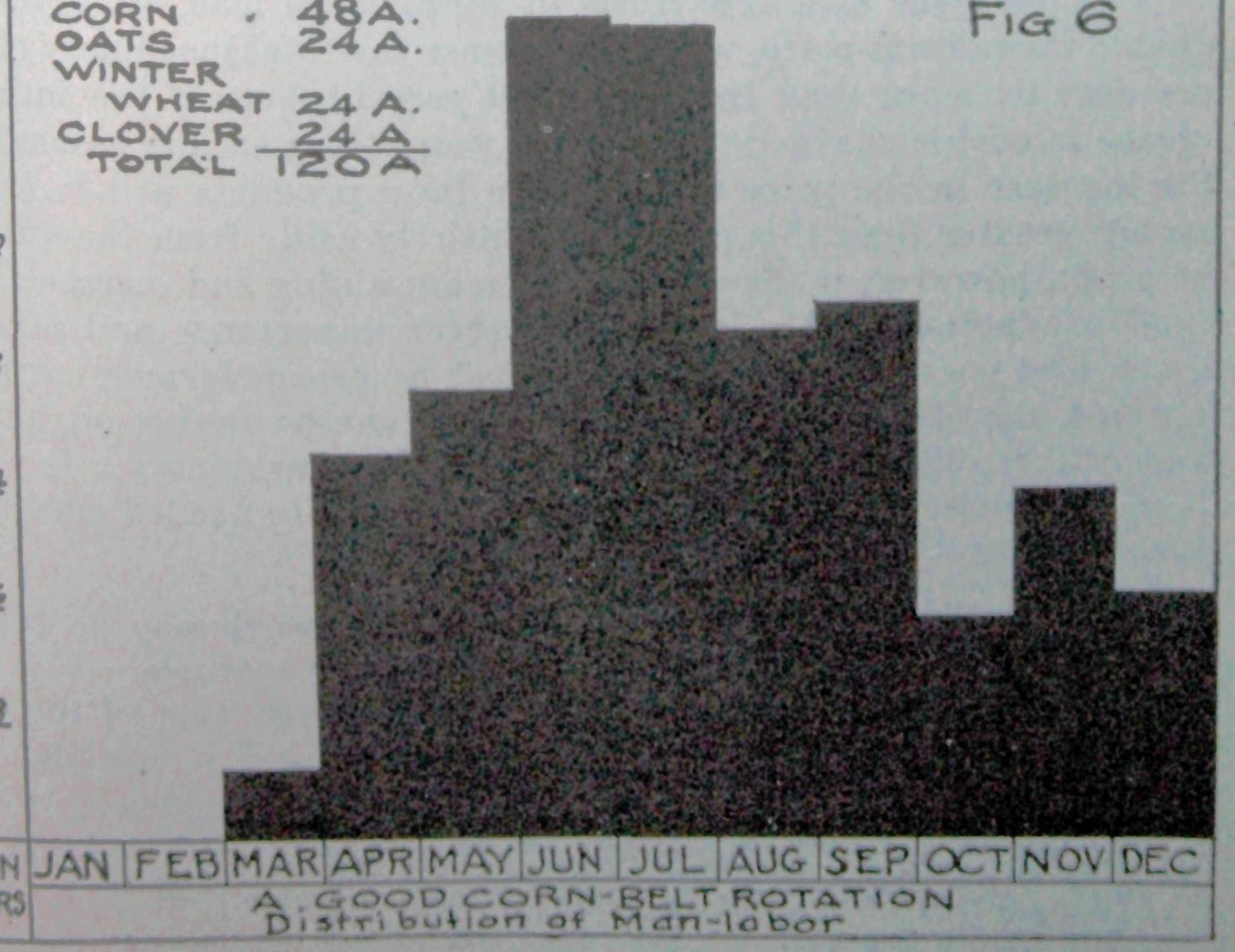
CORN 80 A.
OATS 40 A.
TOTAL 120 A.



A COMMON CORN-BELT ROTATION
Distribution of Man-labor

FIG 6

CORN 48 A.
OATS 24 A.
WINTER WHEAT 24 A.
CLOVER 24 A
TOTAL 120 A



A GOOD CORN-BELT ROTATION
Distribution of Man-labor

It is often possible to save man labor by doubling up horse power.[1] This is sometimes done by using enough horses to draw a harrow attachment on a gang plow, or by having a man who is disking lead another team hitched to a harrow or to a second disk. While this has been done only occasionally in normal times, it may be possible to effect a saving of man labor more generally in this way, especially where the kind of men and horses used make it practicable. Some saving in man labor is often made by working horses in shifts, changing teams perhaps every quarter day. This is done during very hot periods, especially for such operations as corn plowing and wheat and oats harvesting. Most farms usually carry enough horses to make the shift for such operations. While many farmers have practiced shifting horses for the work mentioned, more will find it profitable during the present crisis.

Use Large-Type Machinery.—Corn-belt farmers are already quite generally using large-type machinery. It is desirable, however, that the practice of combining large units of machinery and horse power be carried still further wherever it is practicable to do so. This should be done in spite of the fact that farm machinery generally is costing just about twice as much as before the war. Such changes in the type of machinery should be made for two reasons: first, because it promises to be profitable, and second, because it makes possible the greatest production per man.

The purchase of a few items of larger-type machinery, even at double the normal price, will not increase the total machinery charge per acre by more than from 10 to 20 percent, even if the entire increase in cost is charged off the first year. It is safe to assume that the increase in the price received for farm products will be considerably greater than this expense. Entirely aside from the question of profit, however, is the question of maintaining and increasing the food production. This is of far greater importance and must be given first consideration by every loyal American farmer. It is important, therefore, that in just so far as it can be used to advantage, and can be obtained, farmers buy large-type machinery. It would be both unwise and unpatriotic not to buy really needed machinery just because it is high in price.

Plan the Farm Work.—In general all farm work may be divided roughly into three classes: *fixed*, *semi-fixed*, and *movable*.

Fixed Work.—Good farmers know that a large part of the work of the farm must be done at definite periods. Each of the planting, cultivating, and harvesting operations must be done usually within a few days or a week of a definite date if best results are to be obtained. These dates may vary somewhat from one year to another,

[1]The tractor, especially of the larger size, is one of the chief means of doubling up horse power. This will be discussed in detail in a later publication.

LABOR CALENDAR FOR THE CORN BELT

PREPARED BY THE DEPARTMENT OF FARM ORGANIZATION AND MANAGEMENT – UNIVERSITY OF ILLINOIS

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
CROPS	Buy necessary seed (M) Test seed corn (M) Clean & test all other seed (M) Break corn stalks (M) Haul ------ manure (M) Haul ------ limestone (M)		Disk corn stalks (S) Plow for corn (S) Disk for oats (F) Plant potatoes (F) Treat & sow oats (F) Sow clover (F) Sow barley (F) Sow rape (F) Sow wheat (F) Sow grass seed (F) Sow alfalfa (F) Sow forage crops for live stock	Disk for corn (F)	Plant corn (F) Harrow corn (F) Roll corn (S) Sow soy beans Sow oats		Harvest soy beans (F) Harvest cow peas (F) Gather (F) seed corn Shock (S) threshing Cut alfalfa (F) Stack (S) threshing Cut alfalfa (F) Cut clover (F) Haul clover seed (S) Thresh soy beans (S) Thresh cow peas (S) Dig roots (S) Fall ---- plow (S) Sow alfalfa (S) Fall harrow (S) Fall disk (S) Haul manure (M) Haul rock phosphate (M) Haul ------ limestone (M) Cut silage (F)	Drill wheat (F) Drill rye (F) Husk ---- corn (F)		Haul manure (M)
LIVE STOCK	Break ---------- colts (M) Feed ---------- steers Feeding and general care of live stock		Lambing (F) Foaling (F) Farrow spring pigs (F) Clip horses (S) Beef cattle calving (F) Market ---------- steers (S)	Shear sheep (S) Castrate lambs (S) Dock lambs (S) Market fall pigs (S) Castrate spring pigs (S) Turn stock on pasture (S) Hatch & care for young chickens (F)			Market ---- lambs (S) Fatten cattle ---------- on grass Concrete roosters from hens (S)		Market spring pigs (S) Haul CSM, tankage, & millfeed (M) Farrow fall pigs (F) Feeder ---------- sheep (S) Buy steers (S) Sell old hens (S)	House live stock Feed ------ steers Feeding & general care of live stock	
MISCELLANEOUS	Overhaul all machinery tools & equipment (M) Repair ----- buildings (M) Cut wood (M) Prune trees (M) Prune vines (M) Spray for (M) San Jose scale		Clean up farmstead (M) Oil & overhaul harness (M) Clean up & repair tile (M) Make garden – continue garden pl Spray -- fruit (F) Fence (M)	Spray fruit Cut ----------			Spray fruit (F) Market apples (S) Make cider (S) Haul coal (M) Tile ---------- Tile (M) Repair fences (M) Repair buildings (M) ---------- weeds (M) House (S) machinery still out ---------- hedge (M) Paint farm buildings (M)	Oil & repair harness Open tile drain (M) Fall building (M) Concrete work (M)	Haul gravel (M) Haul cinders (M)	

GENERAL REPAIRING OF BUILDINGS, MACHINERY, TOOLS, FE... MISCELLANEOUS EQUIPMENT ON RAINY DAYS & STORMY WEATHER, WHEN THE REGULAR FA... CANNOT WELL BE DONE

This calendar is based on the conditions found on the gene... of the corn belt, mainly, Central Illinois.
Many operations listed will vary with latitude and ... and, to some extent, with individual farms.
The letters following the operations listed above are used to indic... classification: (F), for fixed work; (S), semi-fixed; and (M), for movable work.

LABOR CALENDAR

PREPARED BY THE DEPARTMENT OF FARM-ORGANIZA

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JU
CROPS	Buy necessary seed (M)		Disk corn stalks (S)	Disk for corn (F)	Plant corn (F)	Cul
	Test seed corn (M)		Plow for corn (S)		Harrow cor	
	Clean & test all other seed (M)		Disk for oats (F)		Roll corn (S)	Use r rotary
	Break corn stalks (M)		Plant potatoes (F)		Sow soy bean	
			Treat & sow oats (F)		Sow cow	
			Sow clover (F)			Cut a
			Sow barley (F)			
			Sow rape (F)			
			Sow wheat (F)			
			Sow grass seed (F)			
	Haul ------ manure (M)		Sow alfalfa (F)			
	Haul ------- limestone (M)		Sow forage crops for live stock			
LIVE STOCK	Break ---------- colts (M)		Lambing (F)	Shear sheep (S)		Mar
			Foaling (F)	Castrate lambs (S)		
				Dock lambs (S)		
			Farrow spring pigs (F)	Market fall pigs (S)	Castrate spring pigs (S)	
			Clip horses (S)			
			Beef cattle calving (F)			
			Market ---------- steers (S)			
	Feed ---------- steers			Turn stock on pasture (S)		
	Feeding and general care of live stock		Hatch & care for young chickens (F)			
MISCELLANEOUS	Overhaul all machinery tools & equipment (M)		Clean up farmstead (M)	Clean up & repair tile (M)		
	Repair ----- buildings (M)		Oil & overhaul harness (M)	Make garden – continue garden pl		
	Cut wood (M)			Spray -- fruit (F)	Spray fruit	
	Prune trees (M)		Fence (M)		Cut ------	
	Prune vines (M)					
	Spray for (M) San Jose scale					

GENERAL REPAIRING OF BUILDINGS, MACHINERY, TOOLS, FE

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Many operations listed will vary with latitude and
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THE CORN BELT

ND MANAGEMENT – UNIVERSITY OF ILLINOIS

JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
		Harvest soy beans(F)	Drill wheat(F)		
rn(F)		Harvest cow peas(F)	Drill rye (F)		
Cut rye(F)					
Cut wheat (F)			Gather(F) seed corn		
Cut oats(F)					
	Shock (S) threshing	Stack(S) threshing	Hull clover seed (S)	Husk---- corn(F)	
	Cut alfalfa(F)	Cut alfalfa (F)	Thresh soy beans(S)		
		Cut clover(F)	Thresh cow peas(S)		
	Cut mixed hay(F)	Fall----plow (S)	Dig roots (S)		
	Plow for alfalfa(S)	Sow alfalfa(S)	Fall harrow(S)		
	Haul manure(M)	Fall disk (S)			Haul manure(M)
s in corn(F)					
potatoes (S)	Haul rock phosphate (M)				
	Haul------limestone(M)		Cut silage(F)		
	----lambs(S)	Market spring pigs(S)		House live stock	
			Haul CSM, tankage, & millfeed(M)		
		Farrow fall pigs(F)			
		Feeder----------sheep(S)			
	Fatten cattle ---------- on grass		Buy steers(S)	Feed------steers	
	Separate roosters from hens(S)		Sell old hens(S)		Feeding & general care of live stock
		Market apples(S) Haul coal(M)		Oil & repair harness	Haul gravel (M)
		Tile----------Tile(M)			Haul cinders(M)
	Spray fruit(F)	Make cider(S) Repair fences(M)	Open tile drain (M)		
Cut		Repair buildings(M)	Fall building(M) Concrete work(M)		
	----------weeds(M)				
	----------hedge (M)	House (S) machinery still out			
	Paint farm buildings(M)				

MISCELLANEOUS EQUIPMENT ON RAINY DAYS & STORMY WEATHER,
CANNOT WELL BE DONE

of the corn belt, mainly, Central Illinois.
and, to some extent, with individual farms.
lassification: (F), for fixed work; (S), semi-fixed; and (M), for movable work.

but the time allotted to each operation cannot usually be extended beyond a few days, without serious injury or loss to the crop.

Because of this fact, it is very important that the crop work especially be pushed with the greatest possible energy at these critical periods. This can be done only by carefully planning so that the entire time of every man and horse may be used to the best advantage. This means that every machine and tool be on hand, thoroly overhauled, and in as nearly perfect working condition as possible before the critical time comes. It means that seed be secured, cleaned, tested, and treated if necessary beforehand during less busy periods.

So also has been somewhat definitely fixed, altho perhaps to a lesser extent, much of the work connected with live-stock operations, such as feeding, breeding, and general management.

Semi-fixed work can usually be shifted from one to three or four weeks. Beyond this it cannot ordinarily be moved without loss or disadvantage. Fall plowing and shock threshing are good illustrations of semi-fixed work.

Movable work can usually be shifted over considerable periods, usually from one to two or three months, and frequently it can be shifted to almost any time during the year, depending on the time when it can best be fitted in. Hauling manure and other fertilizers and overhauling and repairing farm machinery, are good examples of movable work. This classification, however, can be at best only a general one. What would be at one time and place movable work might be at another semi-fixed, and vice versa.

Plan to Fit Together the Three Classes of Work.—In the planning of the farm work, the operator should aim to have the semi-fixed work fit in between the fixed work just as largely as possible. The movable work should be fitted in between the other two classes. If this can be done, it will go a long way toward securing the greatest amount of work from the labor at hand. The most successful farmers already carry out this scheme to a considerable extent, but even they will need to study their operations and make every possible improvement during the period of war. Such improvements will be of special importance, however, on the large number of farms where the matter has received all too little attention up to date.

Study the Farm Work Calendar.—The accompanying work calendar listing practically all of the operations that are likely to occur on any corn-belt farm, and showing the approximate dates when they should be done, may be helpful in planning the farm work. The important aim in planning all farm work is to make sure that no semi-fixed or movable work will need to be done when the critical crop or live-stock operations must have the labor or suffer. Enough unavoidable delays will still come in even with the best made plans, but without such plans such delays are certain to be much greater.

Let Live Stock Harvest Crops.—Much labor can be saved by letting live stock harvest crops instead of harvesting them by hand. This is especially true of the practice of growing pork on forage crops and also of hogging-down corn and other crops, and of growing and fattening market hogs on the self-feeder. All of these practices are already common on the most successful hog farms in the corn belt, but they should be much more generally practiced, in order first, to save man labor, and second, to make possible the use of more legume forage and less corn and other grain in making pork.

Swine alone, however, cannot consume so large an acreage of the legume crops as is necessary to maintain the soil nitrogen. Beef cattle and sheep are especially fitted to consume these crops with the minimum use of man labor. If legume pasture mixtures[1] make up a considerable part of the necessary legume area, the man labor requirements for the entire farm may be materially cut down. If hogs produced on forage require less corn, more corn will be left for beef cattle and sheep. Beef cattle, sheep, and hogs require relatively little labor. A combination of either beef cattle or sheep, or both, with hogs would therefore be well adapted to the consumption of our corn-belt crops and the best utilization of our man labor. Practically all of the corn crop must be consumed by animals. Unless plowed under directly, all of the legume crop commonly grown must also be fed to animals. At least a portion of these can be pastured off to good advantage. It is important to let the live stock do the work as far as possible.

Plan All Work Some Time Ahead.—The best farmers carefully plan all farm work for a considerable time ahead. Most of the fixed work can be planned for only a day or two or a week at most. Changes in weather may make replanning necessary from day to day or even from hour to hour. The chief advantage of a carefully made plan at the beginning of the year and of a follow-up system to keep tab on the work from day to day is that it keeps before the operator the things that need to be done. This will help him in deciding which need to be done first, and in fitting the various jobs together in such a way that the greatest amount of work may be done with the time and energy available.

The most important farm operations either with crop or animals are seldom overlooked. Much time is often lost, however, by not keeping careful tab on the miscellaneous work, such as overhauling and repairing machinery and tools, fixing fences, getting seed ready beforehand, castrating and ringing pigs, castrating and docking

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[1]Such mixtures should contain a considerable proportion of legumes, including some of the rank-growing ones. The latter are important from the standpoint both of adding nitrogen to the soil and also of resisting dry seasons. One of the most promising pasture mixtures being used is a seeding of 4 pounds of alsike, 4 pounds of alfalfa, 4 pounds of sweet clover, and 4 pounds of timothy.

lambs, and breeding animals at the proper season. Thru being neglected at the proper time (*i. e.*, usually between the busiest seasons and on rainy days and bad weather), these matters often conflict with the most important work at the rush periods. Every such miscellaneous job that could have been done at some other time means practically a waste of time at the most critical periods, when every hour is of greatest importance in producing or saving a crop.

Keep Tab on the Farm Work.—A small notebook carried in the pocket or a pad kept in some convenient place may be used to jot down from day to day such items as come to the attention of the operator. Such notes help greatly in providing profitable work for rainy days and at odd moments during the cropping season. Used in connection with the work calendar, such notes will add much to the most efficient use of man labor.

Farm Labor Must be Drawn from Other Sources.—In order to maintain as nearly as possible the normal supply of farm labor, the farmer must draw upon other than the usual sources. The most important of these will probably be the following:

1. Retired farmers from the small towns and villages, especially at the critical periods, such as planting and harvesting.
2. Merchants and other business men from the country towns and villages. These can usually get away from their business for a few days at a time, especially during the farmers' rush seasons, when business is very quiet in town.
3. Boys of high school age who do not normally work on farms.
4. Women workers for some of the lighter work of the farm.
5. Other workers, especially those who have had more or less farm experience, who are engaged in less essential industries, many of which will no doubt be curtailed if the war continues for any length of time.

Retired Farmers Make Skilled Hands.—Many so-called retired farmers normally do some farm work, either on their own farms or elsewhere. Last season many more of them responded to the call for service in raising crops. During the coming season every retired farmer who is physically able should be on the "firing line" again. Most of these men have been not only high-class farm hands, but also skilled farm managers, and can now be of great service both in doing actual farm work and in helping to direct unexperienced labor, such as will necessarily be used to a greater extent than usual.

It is especially important that the retired farmers help at the rush seasons, such as planting and harvesting. It will also help greatly to have these men actually agree in advance, in so far as they can, to take the job of "tending" thirty or forty acres of corn. This could be done in many cases, and it would help greatly in assuring the farm operator that he can put in somewhere near his normal acreage of corn and have it taken care of. The able-bodied retired farmer is going to have an opportunity to render a really important service during the present emergency.

Merchants and Others Can also Help.—Many merchants and other business men and their assistants in small towns and villages have had farm experience. Most of them are occupied with their own business, but they can often spare some help, and that at the periods when it is of the most importance. During the rush season on the farm, very few farmers go to town. This is, in fact, the dull season in the rural village. If the need for farm help should be really critical at such periods, the men from the small town will have an opportunity to render a very important service in crop production, especially if they are somewhat experienced in farm work.[1]

Town Boys Soon Learn.—The past season has already demonstrated the value of boys of high-school age for doing farm work. Even tho they have no experience in farming, many of these boys will develop, under proper direction, into really valuable hands in the course of a season. Many of them will no doubt prove of little value. In the main, however, the value of their service will depend in a large measure upon the skill of the farm operator in training them. The nation-wide organization of the boys, thru the United States Boys' Working Reserve and other agencies, promises to do much for the farmer in the way of selecting the boys who are really interested in farming and in placing the best ones on farms where they will have a fair chance to make good. Farm boys have always done much of the farm work. City boys carefully selected should be an important factor in solving the farm labor problems after they have had a chance to get some training in the affairs of the farm. If the war continues beyond the year 1918, as we must now assume it will, it is very important that we train as many boys during the coming year as possible. They will be experienced farm help in 1919 and 1920.

Women Can Help at Rush Periods.—In general American farm women do little work in the field. In so far as they actually take any part in production, it is confined almost entirely to the dairy, garden, and poultry enterprizes. To all of these, women are well adapted, and many farm women and girls find them both enjoyable and profitable. The farm work actually done by women and girls will likely be confined to the lighter operations, such as raking hay, mowing, using a riding cultivator or plow, and similar work, and these only in case of the most critical needs for a few days at a time.

Farm Labor Must Come from Other Industries.—Our industrial life as compared with that of the other nations at war, is as yet

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[1]The most critical period as regards the need of skilled labor accustomed to handling machinery and teams comes perhaps during soil preparation, planting, and corn cultivation. During haying and harvesting, a larger proportion of unskilled labor may be used.

only slightly affected. Should the war continue for two or three years or more, many forms of production and service will no doubt be greatly reduced. Many important industries not directly connected with war production are already running with short crews or are entirely shut down. This curtailing of industries will make available relatively more men for military service and the essential war industries, including the manufacture of munitions and other war materials, transportation, shipbuilding, and agriculture.

Farm Wages Must Be Fair.—In competing for labor with other industries, the farmer must naturally expect to pay wages which are somewhere near comparable with those paid elsewhere if he is to have help. Just how far he can go in this competition is a difficult question for him to solve. The present price of most of our ordinary farm products is from one and one-half to three times as high as it was just before the opening of the war. The expense of production, however, has also increased, tho just what this increase has been it is hard to estimate accurately. The chief items of expense in producing farm crops are rent, man labor, and horse labor. Rent or interest on land investment, which makes up about 40 to 50 percent of the cost of producing crops, has increased relatively little during the war. The cost of horse labor has increased about 50 percent. Upon the whole, the increase in the cost of production during 1917 amounted to perhaps 35 to 40 percent over the pre-war basis. If this should be somewhat further increased in 1918, it may become 50 percent greater than before the war. The average value of the crops actually grown on our corn-belt farms has about doubled during the past three years.

On the basis of these increases it would seem that the farmer can afford to pay considerably more for labor than he has been paying. This would be especially true if he could be assured of these prices for a year or two after the war, as he has already been assured, to some extent, of the price of wheat and pork for the period of the war.

American Farmer Will Do his Duty.—At the present moment it is difficult to see just how the farmer is going to get enough labor to increase or even to maintain his production. However, the combined result of the additional labor from sources not usually counted upon and the efficient use of the total labor at hand, should go a long way toward accomplishing what appears to be impossible at this date. Changes in the usual systems of production may have to be made. The situation at best will be very difficult, but from what is known of the American Farmer, it is safe to assert that if he has any reasonable chance in the way of favorable seasons and an adequate labor supply, he will feed not only us but our allies.