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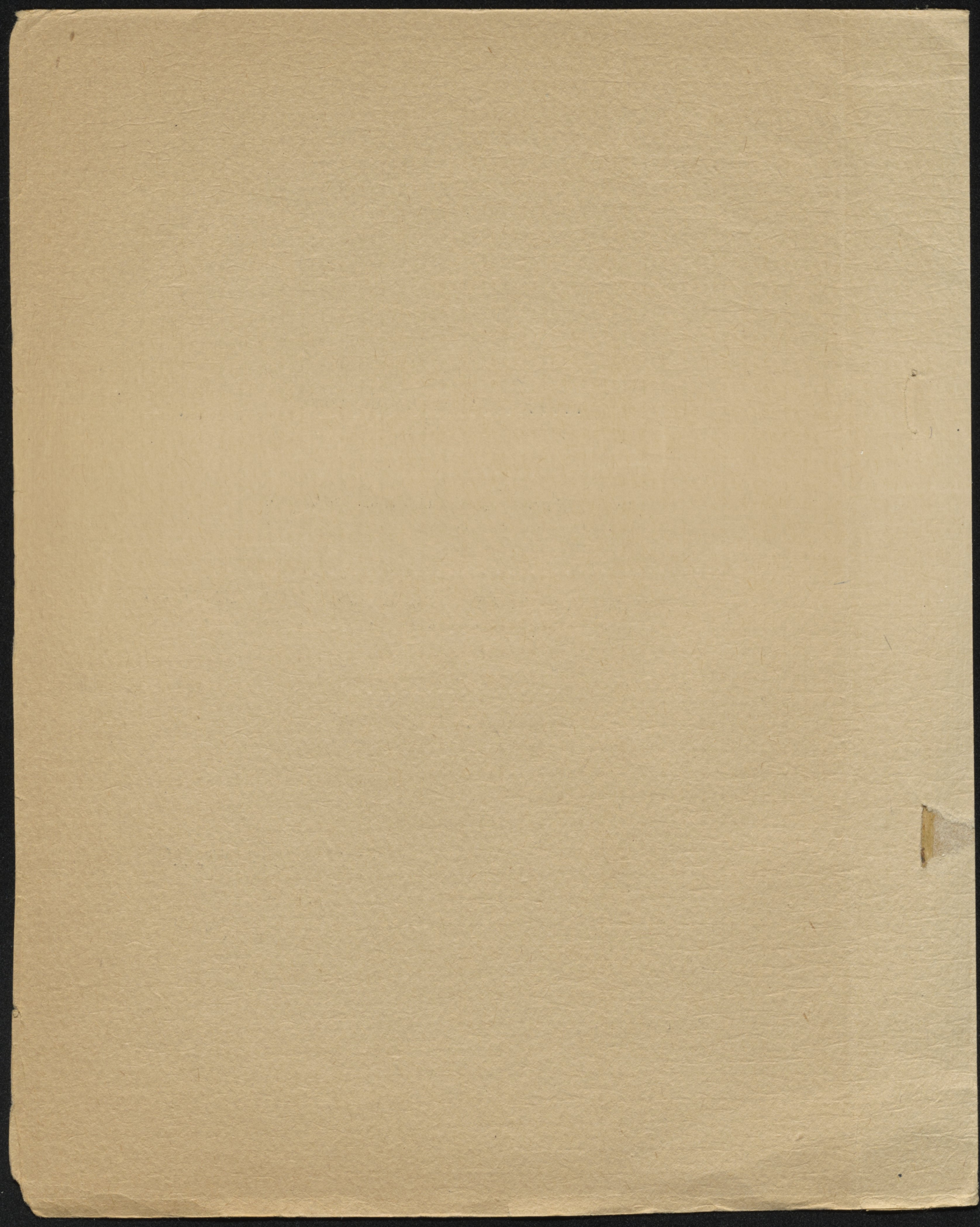
Department of Economics
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Seale-Hayne Agricultural College
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A PRELIMINARY STUDY OF FARM LABOUR ORGANISATION
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IN
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DEVON AND CORNWALL
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ECONOMICS DEPARTMENT

W. H. LONG.

J. J. MACGREGOR.

C. DANIEL.

N. F. McCANN.

February 1932

RECEIVED BY THE DIRECTOR

GENERAL INVESTIGATIVE DIVISION

U. S. DEPARTMENT OF JUSTICE

WASHINGTON, D. C.

APR 11 1950

MEMORANDUM

TO :

FROM :

DATE:

(1)

A PRELIMINARY STUDY OF FARM LABOUR ORGANISATION
IN DEVON AND CORNWALL

Twenty two farmers kept a complete diary record of their man and horse labour for the year October 1930 to September 1931. A full report on this work will be issued when the diaries for the current year, 1931-32, are completed. Conditions of one year may not be typical, and it is expected that the average of two years will provide much more reliable information than could be hoped for if conclusions were based on the results of one year's work only.

In the meantime, an analysis of one year's figures brings to light certain points regarding method and results which should not be without interest to all those farmers who have kept their diary for the full year.

I.

PRODUCTIVE WORK PER ACRE.

In the last report on your financial accounts which was sent you a few months ago, some figures were included which represent the number of hours of man and horse labour which are needed to grow an acre of the more important crops and tend the stock under Devon and Cornwall conditions. These figures are given again overleaf:-

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	Man la- bour Hours per acre	Horse la- bour Hours per acre		Man la- bour per head	Horse la- bour per head
Wheat	41.6	40.0	Dairy cows	210.9	8.5
Barley	40.8	43.3	Other cattle	34.8	8.6
Oats	41.8	42.2	Ewes	12.0	1.3
Arish	10.7	18.6	Other sheep	5.0	0.5
Mangolds	140.7	77.2	Brood Sows	30.0	5.0
Swedes	57.8	51.7	Other pigs	5.0	1.0
Rape	24.6	45.8			
Potatoes	229.5	65.5		per 100	per 100
Dung to roots	23.9	21.6		head	head
Dung to grass	18.5	17.0	Poultry	200.0	20.0
Hay	15.8	12.7	Pullets	50.0	5.0
Temp. Grass (grazed)	2.2	1.3			
Perm. Pasture (grazed)	2.8	2.2			
Orchards	66.3	5.7			

By using these figures, (which refer only to productive labour) it is possible to work out how much productive work any individual farmer has on his farm, assuming that it takes the same amount of labour to grow an acre of wheat, barley, etc. on his farm as on the average. (This assumption, of course, is not always justified. The man with a particularly hilly farm, or one with a bad lay out, would probably take more labour than the average; the farm on level land, easy working soil, with large fields, should get through with less labour than the average. However, in most cases, the average figures should apply fairly well.)

The following examples will shew the way that productive work is arrived at in the case of man labour $\frac{1}{2}$

Suppose a farm is cropped as follows:- Barley 20 acres, Oats 10 acres, Mangolds 10 acres, Hay 25 acres,

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

In the second section, the author outlines the various methods used to collect and analyze the data. This includes both primary and secondary data collection techniques. The primary data was gathered through direct observation and interviews with key personnel. Secondary data was obtained from existing reports and databases.

The analysis of the data revealed several key trends and patterns. One significant finding was the correlation between certain variables, which suggests a causal relationship. This insight is crucial for understanding the underlying factors influencing the outcomes.

Based on the findings, several recommendations are proposed to improve the current processes. These include implementing more robust data management systems and enhancing the training of staff involved in data collection. Regular audits and reviews are also suggested to ensure ongoing accuracy and reliability.

In conclusion, the study has provided a comprehensive overview of the data collection and analysis process. The findings and recommendations offer valuable insights that can be applied to similar situations, contributing to more effective data-driven decision-making.

(3)

Grazing 100 acres, Cows 12, other cattle 30, Breeding Ewes 60, Other sheep 30. The productive man work hours on this farm of 165 acres will be:-

	acres		hours per acre		work units
Barley	20	X	40.8		816
Oats	10	X	41.8		418
Mangolds	10	X	140.7		1407
Hay	25	X	15.8		395
Grass	100	X	2.8		<u>280</u> 3316
		number			
Cows	12	X	210.9		<u>2530.8</u>
Other cattle	30	X	34.8		1044
Breeding Ewes	60	X	12.0		740
Other sheep	30	X	5.0		<u>150</u> 4464.8
					<u>7780.8</u>

Such a man would have 7780.8 productive man work units (or hours) on his farm of 165 acres, made up of

Crops 3316 hours
Stock 4464.8 hours

If we divide by 165, the productive hours per acre can be worked out, thus

Crops	3316	÷	165	=	20.1	hours
Stock	<u>4464.8</u>	÷	165	=	<u>27.1</u>	"
Total	<u>7780.8</u>	÷	165	=	<u>47.2</u>	"

Horse labour figures can be worked out in a similar way.

These figures, which are, of course, entirely theoretical, have been worked out for each of the 22 farms, and they have then been compared with the actual hours per

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acre, as worked out from the diary records.

THE RESULT SHEWS A CLOSE CONNECTION BETWEEN ACTUAL AND THEORETICAL HOURS OF LABOUR IN THE CASE OF CROPS ON NEARLY EVERY FARM, BUT THE STOCK FIGURES ARE DISAPPOINTING.

CROPS. The average productive man labour on crops (theoretical) on 21^x farms was 22.8 hours per acre.

The average productive man labour based on the diary records of the same farms was 24.0 hours per acre.

The average productive horse labour on crops (theoretical) on 21^x farms was 19.4 hours per acre.

The average productive horse labour based on the diary records was 18.9 hours per acre.

The very close connection between the hours per acre of both man and horse labour when worked out on two methods which have no connection with each other suggests that there can be very little wrong either with the theoretical figures, or with the diaries, which, so far as crops are concerned, must have been entered up very accurately and systematically by all the farmers participating in this scheme.

STOCK. The average productive man labour on stock (theoretical) on 21^x farms was 28.75 hours per acre.

The average productive man labour, based on the diary records of the same farms was 20.2 hours per acre.

^x Complete information on one farm was lacking.

1945

1. The first part of the report deals with the general situation of the country and the progress of the war.

2. It is noted that the war has been a long and hard one, and that the people have suffered greatly.

3. The report also mentions the importance of the work done by the people during the war.

4. It is stated that the people have shown great courage and determination in the face of the enemy.

5. The report concludes by saying that the people are now looking forward to a peaceful future.

The average productive horse labour on stock (theoretical) on 21^x farms was 3.7 hours per acre.

The average productive horse labour, based on the diary records of the same farms was 2.6 hours per acre.

It is not easy to say definitely whether these discrepancies with regard to labour on stock are due to the theoretical figures being too high, or to some work on stock having been omitted from some of the diary records. It is not likely that the theoretical figure is much, if any, too high, but from certain checks which it has been possible to apply to the diary records, we are of opinion that in some cases part of the work on stock has been omitted. We suggest that this may have happened when it has been work which the farmer has done himself, such as shepherding, or perhaps odd jobs, which may have been entered as jobbing, and which may, therefore, have been analysed as miscellaneous work. In any case, while we congratulate all those farmers co-operating on the very efficient way in which the crop work appears to have been entered in the diary, we would urge everyone to exercise particular care in the remaining months of the second year's diary with regard to work on stock. Enter up all work, whether done by paid or unpaid labour.

^x

Complete information on one farm was lacking.

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II HORSE LABOUR

The average size of the 22 farms participating in this scheme was 227 acres. On an average, 101 acres were to crops (including hay and orchards, if any) and 126 acres were pasture, temporary or permanent.

The number of working horses averaged $4\frac{1}{2}$ per farm. This does not allow anything for tractors, which were present on 4 of the 22 farms.

It is often assumed that a pair of horses should be capable of working 50 to 60 acres of arable, (i.e. 25 to 30 acres each). On the average of these farms, $4\frac{1}{2}$ horses accounted for only 101 acres of crops on 22 or 23 acres per horse. (If the land hay acreage were excluded, in order to make the comparison on acres of arable, the horse work on the dairy farms would be even fewer acres per horse.) No allowance has been made here for the tractors, where they occur.

The diary records indicate that on an average, each horse did $1087\frac{1}{2}$ hours of work per year. If it is assumed that in a working day a horse will do $7\frac{1}{2}$ hours work, then 145 full days were worked per horse during the year on an average. In the case of some farms, the figure would probably be higher if it were not for a horse kept for jobbing. Such a horse is not in regular employment, and the low number of hours worked by this horse helps to lower the average of the whole team.

1944

1. The first part of the report deals with the general situation of the country and the progress of the war. It is a very interesting and informative account of the events of the year.

2. The second part of the report deals with the economic situation of the country. It is a very detailed and thorough analysis of the economic conditions and the measures taken to improve them.

3. The third part of the report deals with the social situation of the country. It is a very comprehensive and up-to-date survey of the social conditions and the efforts to improve them.

4. The fourth part of the report deals with the cultural situation of the country. It is a very interesting and detailed account of the cultural life and the efforts to promote it.

5. The fifth part of the report deals with the political situation of the country. It is a very thorough and detailed analysis of the political conditions and the measures taken to improve them.

6. The sixth part of the report deals with the military situation of the country. It is a very comprehensive and up-to-date survey of the military conditions and the efforts to improve them.

7. The seventh part of the report deals with the international situation of the country. It is a very interesting and detailed account of the international relations and the efforts to improve them.

8. The eighth part of the report deals with the future of the country. It is a very thorough and detailed analysis of the future prospects and the measures taken to improve them.

9. The ninth part of the report deals with the conclusion of the report. It is a very interesting and detailed account of the overall situation and the efforts to improve it.

10. The tenth part of the report deals with the appendix. It is a very comprehensive and up-to-date survey of the various aspects of the country's development.

(7)

But even allowing for this, and for the fact that not all the horse labour may have been entered against the stock (see page 5), there seems to be a tendency on many farms for more horses to be kept than is warranted by the amount of employment which can be given them.

YOUR FARM

1. The first part of the document
describes the general situation
of the country and the
state of the economy.
It also mentions the
main problems that
the government is facing.
2. The second part of the document
describes the measures that
the government has taken
to solve these problems.
It also mentions the
results of these measures.
3. The third part of the document
describes the future plans
of the government.
It also mentions the
challenges that the
government will face.

4. The fourth part of the document
describes the role of the
private sector in the
economy. It also mentions
the measures that the
government has taken to
encourage the private
sector. 5. The fifth part of the
document describes the
role of the public sector
in the economy. It also
mentions the measures that
the government has taken
to improve the public
sector. 6. The sixth part of
the document describes the
role of the social sector
in the economy. It also
mentions the measures that
the government has taken
to improve the social
sector.

7. The seventh part of the
document describes the
role of the environment
in the economy. It also
mentions the measures that
the government has taken
to protect the environment.
8. The eighth part of the
document describes the
role of the culture in the
economy. It also mentions
the measures that the
government has taken to
promote the culture.

9. The ninth part of the
document describes the
role of the science and
technology in the economy.
It also mentions the
measures that the
government has taken to
promote science and
technology. 10. The tenth
part of the document
describes the role of the
education in the economy.
It also mentions the
measures that the
government has taken to
improve the education.

The document is a report on the
economy of the country. It
describes the general situation
of the country and the state
of the economy. It also
mentions the main problems
that the government is facing.
The document is divided into
ten parts. Each part describes
a different aspect of the
economy. The first part
describes the general situation
of the country and the state
of the economy. The second
part describes the measures
that the government has taken
to solve these problems. The
third part describes the future
plans of the government. The
fourth part describes the role
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sector in the economy. The
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environment in the economy.
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role of the culture in the
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describes the role of the
science and technology in the
economy. The tenth part
describes the role of the
education in the economy.

III MISCELLANEOUS WORK

Work spent on crops and stock can fairly be regarded as directly productive work. In addition to this work, every farmer must devote some of his labour to work which is not directly productive, although in many cases it is work which is very necessary. Such work is hedging, ditching, white-washing etc. etc. In the analysis of the diary records, all this work has been entered under the one heading of "Miscellaneous Work". However efficiently the labour staff of a farm may be organised, a certain amount of Miscellaneous (or unproductive) work will be necessary. But it is probably true to say that the more insignificant this work is, the more efficiently will the labour force be organised, and the better chance will the farmer have of returning an adequate profit at the end of the year.

On an average 3021 hours of man labour (equal to one man for more than a year at $8\frac{1}{2}$ hours per day) were spent on miscellaneous work over the year per farm. This equals 133 hours per acre, and between one-fifth and one-quarter of the total labour spent on a farm.

Horse labour on miscellaneous work totalled 409 hours per farm, or 1.8 hours per acre. It represented less than one-tenth of the total horse work per farm.

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Summary.

We do not feel justified in drawing many conclusions from the diaries as analysed at present because one year's results appear to us to be inadequate as a basis. After, ~~when~~ a second year's records have been analysed, we hope to produce a much more comprehensive report.

The outstanding features of the analysis, as presented above, appear to be as follows:-

1. The method of estimating the amount of productive work on farms, as explained on page 3, appears to be justified for all normal farms by the actual time taken on crops as indicated by the average of the diary records.

2. The average estimated figures for stock would bear further investigation, although there are grounds for supposing that not all the stock work has been entered on all the diaries.

3. On nearly every farm it would appear that the horses scarcely do enough work to earn their keep.

4. Miscellaneous work (i.e. work which is not directly productive) accounts for about one-quarter of the total farm work.

We hope that you will write for further particulars on any points which are not quite clear to you.

W. H. Long.

February 1932.

N. F. McCann.

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