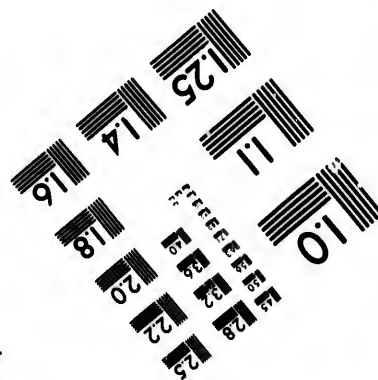
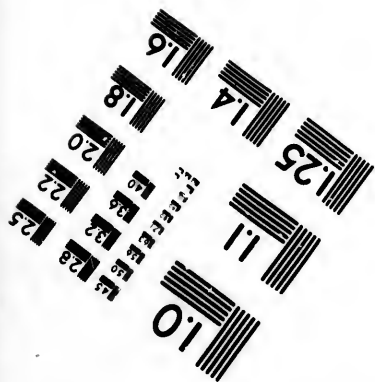


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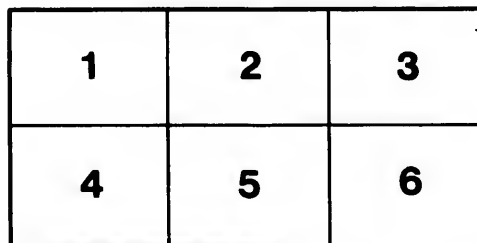
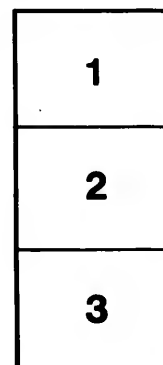
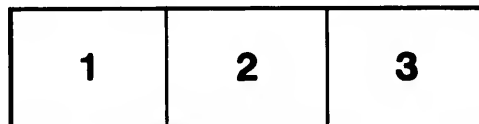
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A NEW SYSTEM
OF
AGRICULTURAL BOOK-KEEPING,
OR
A SAFE AND EASY METHOD
FOR CONDUCTING FARMING OPERATIONS.

BY F. M. F. OSSAYE.



MONTREAL,
PRINTED BY JOHN LOVELL, AT HIS STEAM-PRESS PRINTING ESTABLISHMENT.

1853.

LP
S567.084

To

To Major T. Edmund Campbell.

OF ST.-HILAIRE-DE-ROUVILLE (CANADA).

"Honor to men, who possessing all that could give them an exalted station in the world, prefer a peaceable country life, consecrating their time, talents, and fortunes to promote the diffusion of sound agricultural knowledge, the introduction of good and proper implements, and above all the elevation of the social condition of the farmer."

MATHEU DE DOMBASLE.

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PREFACE.

WITHOUT economy or order, farming business cannot prosper.

These two elements of success are almost always to be found in cultivation of the land on a very small scale. The working man, who, for the support of his family, depends entirely upon the produce of his garden or his little field, will soon be made to feel the fatal effects of a want of order : in his case, want of economy is starvation, want of order, ruin.

It is in farms of a middling size, from 30 to 80 acres, that most commonly, waste of time, carelessness, and irregularity, are to be seen, because they are for the most part in the hands of the least educated class of farmers, and the land being of sufficient extent to supply the most pressing wants of the family, from the natural productions of the soil, the faults may exist for a long time with impunity : in this case, the farmer aided by nature, which provides him with pasture, exerts himself just enough to *scratch over* a portion of his land, and sow some grain, upon which he depends to help him through a bad season, without much trouble : it never enters his head to improve his cultivation or to lay by : all he desires is to get through the year with as little privation as possible.

Farming on a large scale cannot be carried on long without order and economy, for whoever undertakes it, being under the necessity of employing a great many hands and keeping up a large establishment, will soon come to the end of his means, if he do not prevent all waste, cut off all useless expenditure and adopt a judicious system of operation.

What then is order and economy ?

By order, I mean not only the care that a farmer should take to keep everything in its proper place, but also the attention he should give to the regularity in each department, the working together of every branch of his business, the faithful and exact account of his receipts and expenses, and the placing them both under their proper heads.

It would be a great mistake to assign to economy, merely the meaning of a niggard parsimony in the ordinary household expenditure. There is another economy more likely to be felt in balancing the receipts and disbursements of a farm, the economy of time and labour.

Economy and order are the easily recognized signs of a well conducted farm. You will find at the head of such a farm, a sensible man ; one, who weighs well beforehand all his orders and his acts ; a minute and careful record of every

occurrence is made, and from this record of his operations generally proceeds his success.

With the careless farmer on the contrary the utmost disorder prevails ; no accounts are kept, the departments are ill organized ; prodigality is everywhere and in every thing ; useless expenses are multiplied and absorb beforehand the receipts ; soon his capital is touched, and the unfortunate man ends in beggary and ruin.

The ruin of the greater number of agriculturists on a large scale, may be ascribed to the absence of all accounts, or to a bad system of keeping them : for want of a daily record, they are unable to ascertain at any moment how they stand, and only discover their errors when it is too late to remedy them. Therefore it is of the utmost importance that every farmer who cultivates on a large scale, should adopt, and invariably follow up, a precise and exact system of keeping accounts.

But it may be said that a great many succeed without keeping any books. To this I would answer, that these farmers for the most part cultivate on a very small scale and are able to carry their accounts in the head. On the other hand, success is very often attributed to every cause but the true one. Those agriculturists are no doubt favourably situated near a city for instance, which facilitates the sale of raw produce, and thus very much simplifies operations ; or having a numerous family of their own, they are not under the necessity of keeping at a heavy expense a great number of labourers, or lastly, perhaps they remain satisfied with old routine in which they have been initiated from childhood. But I hesitate not to affirm that out of such exceptions, the agriculturist who wishes either to modify or improve a local mode of operation, cannot possibly succeed, unless he carefully register every expense under its proper head, write down every operation and establish a perfect concord of all branches ; all of which, is not to be done without keeping Books.

The object of Account-keeping is not merely to show profit and losses, but also to give a *basso relievo*, or illustrating plan, of the farm business and guide its conductor, as a chart helps the seaman to steer his ship through rocks and shoals.

Being perfectly satisfied that a good system of accounts, carefully carried out, is indispensable to the entire success of any farm operations of any importance, I have endeavoured to arrange a method at once simple and clear, and applicable to any sort of farming and I hasten to deliver to the public the fruit of my labour. May it prove useful : for my part, I can say, that it has helped me greatly to view agriculture in its proper light, and to remove from my eyes, erroneous impressions which I had at first entertained.

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PRELIMINARY OBSERVATIONS

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GENERAL ARRANGEMENT OF BOOKS, STORE BOOK, INVENTORY.

GENERAL ARRANGEMENTS OF BOOKS AND ACCOUNTS THEREIN.

In farming on a large scale, three operations are going on at the same time.

The object of the first, is animal production, viz : milk, meat, wool, manure, &c.

The object of the second, embraces vegetables, that is, the culture of fodders, grain, and plants used in commerce, textile, fit for dye, oil, &c.

And the third, commands the moving force, if one may so call it, or in other words, the labour of horses and men, which is necessary to set the other two going.

These three operations are often carried on separately, but on small scale agriculture. Thus we see in the vicinity of cities, speculators feeding milk-cows, on fodder and distillery refuse, purchased and not raised by them, whilst they sell their milk to the city and their manure to other speculators, who rent small lots for raising vegetables and fodder, which they sell sometimes to the first to feed their cows; finally, both have often recourse to a third, who lets horses or teams.

The general farmer keeps in his own hand these three operations. He feeds his animals on fodder raised by himself; he enriches his fields with manure out of his own stables; he cultivates and takes to market his produce with his own teams; consequently his accounts are, and should be, but a combination of those kept by each of the three speculators spoken of.

Three books may answer the purpose.

The first is the Journal, in which is put down the occurrences of the day, as they take place, to be entered afterwards into the two other books, according to the branch and particular accounts to which they refer.

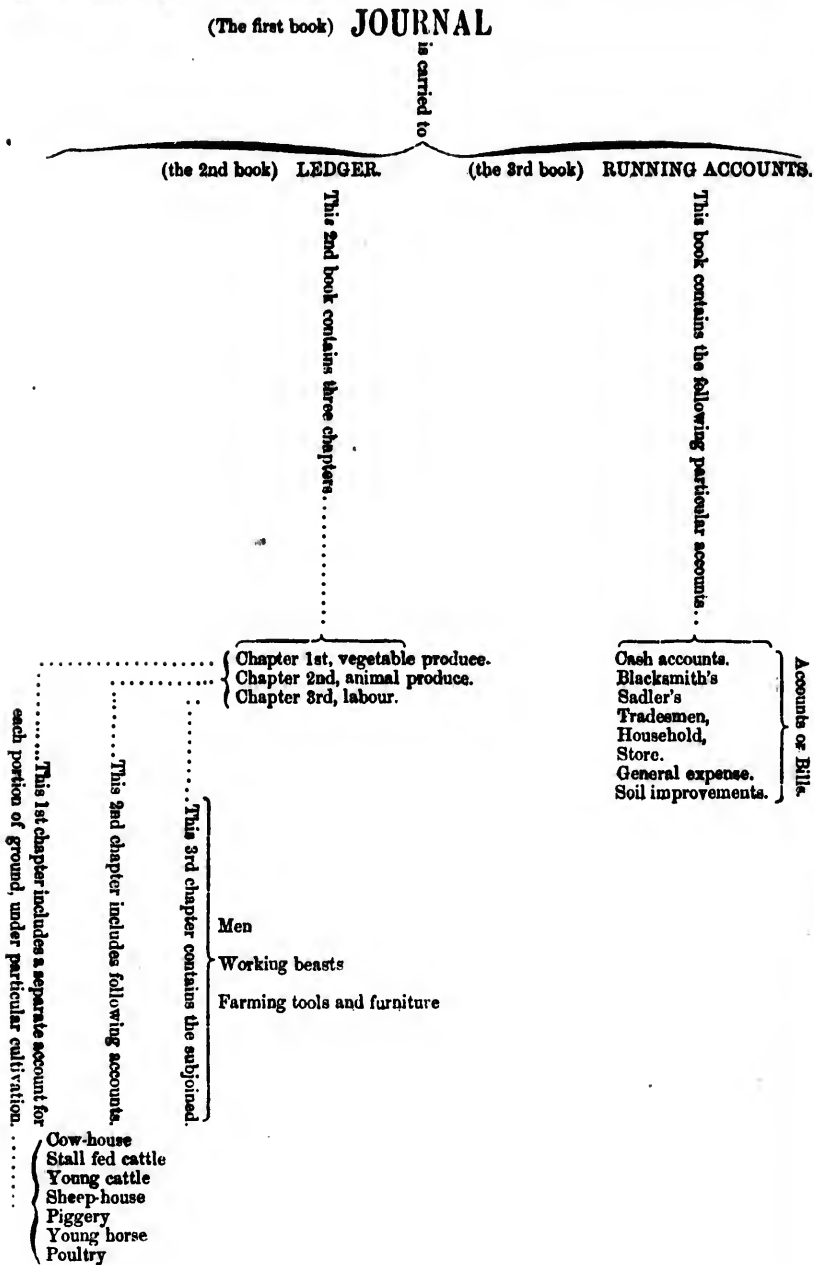
These entries may be deferred to the end of each month, but it is better to make them every day, or at least every week.

The second or Ledger, is divided into three chapters; referring, the first to vegetable produce; the second, to the animal produce; and the third, to labour and contains separate accounts for each species of production, requiring particular service.

And the third includes cash and running accounts.

From what I have just said of the object of those books, and their con-

tents, the following table should sufficiently illustrate the mechanism of my account-keeping :



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STORE ACCOUNTS.

Among the accounts current, there are three very important ones, which it would be well to explain before examining the books, I mean the store accounts. Their frequent and combined relations with the two former branches, the vegetable and animal produce, render them rather hard to be understood; but with a little reflection, the following observations may remove all difficulties, and at the same time make apparant the utility of these particular accounts.

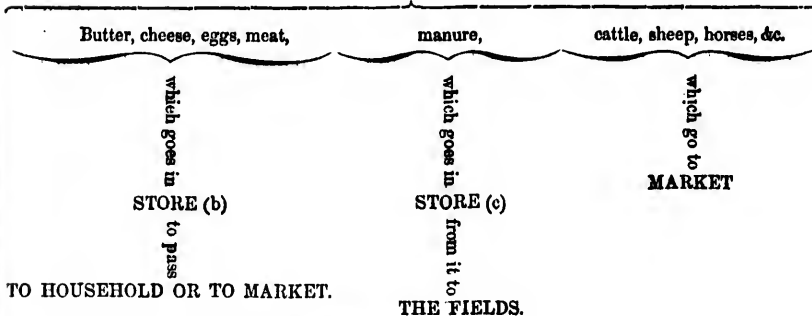
In the cultivating of a farm, immediately after harvest,

GRAIN AND FODDER.

are in
STORE (a.)
whence they go

to market, house-keeping, sowing field, working beasts, or to animal department.

which
industry is then converted into



By means of the foregoing table we see :

That a first store (a) receives all the vegetable produce whatever, from the moment it is harvested.

That anothe rstore (b) receives the same fodder, transformed through various branches of the animal department into cheese, butter, eggs, wool, and meat, as salt meat.

And that a third store (c) yards and depots, receives that same vegetable produce converted into manure.

NG ACCOUNTS.

This book contains the following particular accounts..

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Accounts of Bill.

This really is the course of all agricultural produce before or after its transformation. As the general account should be a faithful picture of the operation of a farm, each of these three stores must have its separate account. Now if we consider each store as trading and paying for each article as it enters, and being paid for each article taken out, the following advantages will result.

1. With these intermediates the first two departments become completely isolated one from another, and so will it be with the different branches among themselves. Hence nothing is more easy than to appreciate the results and the value of each.

2. As soon as any article whatever is stored, the department which has produced it being paid by the store, may close its account at once, without being obliged to await the chances of a sale at market, it is needless to say that the prices assigned to each article, should be the current market price, both for what comes in or goes out of the store, deduction being made of cost of freight to market.

3. Every article of produce being carefully entered into the store accounts, the farmer may easily detect the least theft and the least waste in the household, or in the administration of any particular branch.

You may always doubt the apparent prosperity of those farmers, whose wives, children, and servants, go freely to the store and *take without counting*, or measuring, *and unknown to the master*, oats, wheat, peas, &c., &c., and in a word, all the provisions for the branch of which he has the care. Very exact store accounts, alone, can prevent disorder in that case and hinder waste in consumption.

4. Finally, by means of store accounts, the necessity of mixing up the second and third departments for a single load of dung, which may be wanted for the garden or for a field, is obviated.

I cannot too often repeat, that to keep the departments separate, one from another, except where communication is absolutely necessary, is the only means to account for them, and ascertain their real value.

N. B. In the book of current accounts, will be found an example of the store-accounts: it would have been more in order to place the preceding remarks after this example, but as in the course of this work we shall frequently have to speak of these store-account, it is necessary that their use and design should be thoroughly understood before proceeding further.

INVENTORY.

In manufacture, an inventory is a detailed estimate of all the materials made use of by the manufacturer, in the confection of his contemplated production. It is made up in the beginning of the enterprise, and renewed every year at the same epoch: the object of it is to make the manufacturer's situation thoroughly known at the end of each period, and to determine exactly the capital upon which he will operate during the next period.

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In agriculture, an inventory is the same, and it has the same object, but it is more complicated and more difficult to be established than in any manufactory, on account of the great variety of branches carried on in a farm—yet a little reflection may accomplish the end. In any case, it is indispensable; for without a preliminary detailed and minute inventory of his stock, the farmer at the end of the season, could but imperfectly appreciate the result of his works, his means of calculating it being deficient.

Nothing is more variable than the value of farming implements: some articles worth to-day £100, may be worth only £50, after twelve months use with a careless farmer; whereas in other hands they might be worth £90. The value of animals may, in the course of the same period, increase or decrease, according as they are well or ill used and treated. Fields may likewise become worth a higher price in consequence of the improvement of the soil, or a lower one after bad tillage, loss of fences, flood or stagnation of water. Out-houses will undergo greater changes still by repairs, new constructions, tumbling down or disasters, &c., in a word, the materials of a farm are susceptible of so great alterations, that the profit realized in the beginning of an enterprise, is often but apparent; whereas ruin, or at least an immense loss is visible, from the lamentable condition of the materials. On the other hand, wise and clever farmers, skilfully returning to the soil what they have drawn from it, seem to clear no profit, whilst they really are enriching themselves by improving their land, in a way not apparent perhaps to a casual observer, but which is not the less sure.

After what has been said it is manifest, that nothing but a minute detailed inventory will show a farmer at the close of each season his real situation.

It should be divided into the three agricultural departments, in order that the farmer may judge of the modifications undergone by each branch, and charged separately to its account, the interest of the capital allotted to it specially.

Thus the valuation of the animals in the cow-house, may determine the interest of the capital, which should appear in the chapter of expenses of this department, (see cow-house). The valuation of the implements of the dairy, may fix the interest of the capital, representing these implements, which interest, should also be found in the chapter of expenses of the same class (cow-house) and so on for the other branches.

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FIRST BOOK.

JOURNAL.

EXAMPLE OF THIS BOOK KEPT FOR TWO DAYS, IN THE MONTHS OF JULY.

Milk furnished by cows during this month.

FOURTEEN COWS.	Dates	MORNING.	EVENING.	Dates	MORNING.	EVENING.
	1	23 gallons.	23½ gallons.	16		
	2	23½ "	23 "	17		
	3			18		
	4			19		
	5			20		
	6			21		
	7			22		
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Total of milk for the whole months.....

July 1st.—John and Louis, hired men, have given the second horse hoeing to red beats; four horses and two hoes employed.

Cows removed from pasture, field No. 3 of the 4th part (sole), where they had been 15 days; to fields No. 2, same part or (sole).

Two horses shod, anew all round.

Paid saddler's bill 17s. 6d., cy.

Butter made, 38 lbs.

To be carried to poultry account, 2 bushels of oats, out of store.

Francis, day labourer, took 6 loads manure to garden, which work occupied him half a day.

In the afternoon joined Joseph and James, who were weeding carrots since morning.

July 2nd.—Trip to town to sell following; spent 7s.

Sold 120 lbs butter, £5 10 0

Sold 3 calves, 4 0 0

Sept. 25th.—John and Louis hoed potatoes, four horses and 2 men employed.

7 young horses 3 years old were put into the 3rd field of the 4th division (sole) to pasture and remained there 1½ month.

Joseph, James, Francis, continued hoeing carrots.

Paid Lewis, hired labourer, 20s. account of wages, &c., &c.

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Explanations.

QUESTION.—Why, in the beginning of each month, do you trace a table, in which you then write down day by day, morning and evening, the quantity of milk given by the cows?

ANSWER.—In the first place, that I may know what profit I derive from my cows every month and every year. Weighing the butter is not sufficient; the milk also should be measured, because skimmed milk constitutes a large item in the return from the cows; and then, that I may judge of the relative effects of different methods of feeding and treating cows, in increasing or diminishing the production of milk and butter. For instance; it will be a great advantage for me to know, if my cows, when fed on lucerne or clover, give more or less milk than when fed on timothy or rye grass; when soiled in the house, than when pastured out: in order that I may so arrange the cultivation of my land and the treatment of my cows, as to obtain the greatest quantity of milk or butter.

QUESTION.—Would it not be sufficient to ascertain all this by approximation?

ANSWER.—In agriculture as well as in trade, every item must be as exact as possible. Now what would you say of a manufacturer, who keeps no regular accounts of the produce of his manufactory, and maintains that it is quite enough for him to know the state of his affairs by approximation?

QUESTION.—Will you tell me how you have taken out the items of your journal, dated July 1st, and to what accounts you have charged them?

ANSWER.—With pleasure, In the article 1st, *John and Louis, hired men, have been hoeing the red beets of field 2nd, first part or (sole).* Four horses and two hoes employed in that work. We see that the 3rd, or labour and implement department, has furnished to the 1st, or vegetable producing, men, horses, and implements; so I charge this day's work of men, horses, and implements, to the account of the field, in which the work has been done, and I carry the same day's work to the credit of the 3rd department, taking care to enter each item under its proper head; viz: men's work, to labourer account; horses, to work horse account, and hoes to that of tools.

Now let us see article 2.

Cows removed from pasture, 3rd field of 4th part, where they had been 15 days, to field No. 5, same part.

Here we see that the first department of vegetable produce, has hired from 2nd department that of animal produce, for 14 cows, during 15 days, the pasturing of 3rd field, 4th part; which in consequence I charge to cow-house expense, these 15 day's pasture, and carry them to the credit of 3rd field, 4th part.*

In article 3: *2 horses shod, &c.* I see nothing but an outlay on the part of the 3rd department which I carry to the debit of horse account, and to the credit of blacksmiths, in the running account book.

The article 4th: *paid saddler 17s. 6d.,* shows the payment of a debt con-

* It being impossible to store up pastured grass, we cannot, by means of store accounts, avoid connexion between vegetable produce department and animal produce, 2nd department.

THIS OF JULY.

EVENING.

bents; four horses
they had been 15

ed him half a day.
morning.

(sole) to pasture

tracted by the 3rd department, which must be charged to the workhorse account. This amount must also be entered in the cash-book.

The article 5th: *made 38 lbs of butter*, states a produce to be carried to cow-house chapter, when at the end of the month, recapitulation takes place of the whole made during the month.

As to labour in making butter, it is included in the account of time employed each day in the general management of the dairy, this account made out at the beginning of each month, according as the work is greater or less, in that particular season, serves for the whole month.

The 6th articles shows that 3rd department has had from the store, 2 bushels of oats, on account of poultry. Therefore this expense must be charged to their account, and these two bushels, must be marked down at the price affixed, as taken out of store.

The 7th article attests that the 1st department has purchased from the store on account of garden, six loads of manure, to cart which the 3rd department has furnished a man with horse and cart during half a day. Consequently, the garden is to be debited with the price of the six loads and carting: the store is credited with the price of the manure, and 3rd department with the value of a half day labour of man, horse, and cart.

By the 8th article it appears that 3rd department has supplied 1st with two-half days labour of a man; which must be charged to the credit of working men's account, and to the debit of the field.

These explanations will suffice to show the use and design of the journal and the manner of carrying to the other books, the items entered in it.

We will now examine each of those books and their different accounts.

NOTE.—The journal being 11 by 8 inches in surface, should consist of 110 pages.

Dates.	
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SECOND BOOK, LEDGER.

CHAPTER I. FIRST DEPARTMENT.

VEGETABLE PRODUCTION.

(FIRST EXAMPLE OF CULTURE ACCOUNTS.)

(Sole) or **PART FIRST.**

Field No. 2, (Red Beets,) (10 Acres.)

Dates.	PRODUCE.		Dates.	EXPENSES.
Octob. 15	Crop,—180,000 lbs. Red Beets, sold to store.....		1852	
	Total Receipts..		1853	Field Rent, one year,.....
			Sept. 10	4 Ploughs used,.....
			" 11	4 do do
			" 12	2 do do
			" 13	2 days' work for draining,.....
			Feb. 5	280 loads manure, out of store, one 6th of it charged to Red Beets,...
			" "	Used 6 men and 4 single teams,...
			April 29	Scattering manure, 5 men, 2 horses.
			" 30	Same—same,.....
			" "	Fence repairing, 3 men,.....
			May 2	4 ploughs buried manure,.....
			" 3	8 horses, 2 men,.....
			" 14	Harrowing, 2 men, 4 horses, 2 harrows,.....
			" 15	Sowing Beets, 5 men, 2 horses, 1 seed sower,.....
			" 16	40 lbs grain,.....
			" 17	Draining, 2 men,.....
			June 28	Cleaning and hoeing, 6 women and 2 men,.....
			" 29	Do do do do
			" 30	Do do do do
			July 1	2nd hoeing, 2 men, 4 horses, 2 hoes,
			" 30	Do do do do
			" 31	Row hoeing, 6 men,.....
			Aug. 12	Howing, 2 men, 2 horses, 2 hoes,...
			" 25	Do do do do
			Oct. 25	Pulling up, stripping, 10 men 5 women,.....
			" 27	Storing, 4 teams, 6 men,.....
			" 28	Do do do do
	Total Expenses being....	" "		Total expenses,.....
	Benefit is.....	" "		

Explanations.

QUESTIONS.—How do you state your culture accounts?

ANSWER.—I will answer you with one example :

Let there be a farm of 300 acres, divided into six parts or *soles*, of 50 acres each, with following rotation: *Hoed and manured fallow, grain-crop, hay, pasture, pasture, grain-crop*. I assign one separate chapter to each part, then I divide each chapter into as many accounts as there are fields, being under different cultivation in said part. (See Red Beets Accounts.)

If the whole part be exclusively under same cultivation, as parts third, fourth and fifth of the rotation I have just mentioned, I state but one single account for all that part. (S. Pasture Account.)

QUESTION.—Why do you charge to expense the field rent?

ANSWER.—In making up the accounts of his annual expenses, besides workmanship and raw materials, a manufacturer always includes the interest of the capital destined to the establishment or to the purchase of the manufactory; likewise the farmer, besides labour and raw materials, namely manure, must note down the interest of the capital represented by soil, which is nothing else but his grain and fodder manufactory, as well as the interest of the capital represented by the buildings wherein he stores up his produce.

QUESTION.—How do you establish that rent?

ANSWER.—I set down first, the value of each field, regard being had both to its quality, extent, and to cost price. This estimate once made, is permanent, unless the value be sensibly increased from soil improvements, or decreased from bad culture or disasters. In either case, the farmer should renew the estimate, in order to know what interest is to be paid out of his crops.

Thus, let us suppose that his first department is carried on on a tract of land costing him £2000, the interest of that capital at 6 per cent, or £120, is to be paid out of all the future crops taken from that tract; if, during his first year, he lay out £200 in draining, at the end of the season, those £200 are to be added up to the £2000 capital, and the interest of cost price, £12, put down to the charge of the coming crops.

If, instead of an improvement, this capital has undergone a decrease; if, for example, there be a portion of land remaining uncultivated from a flood, the loss should be calculated, and the crops only charged with the interest of the capital representing the value of the land.

QUESTION.—I see that under the dates of 10th, 11th and 12th October, you detail the day's work in ploughing. Would it not have been simpler to group those days together and value them in a lump?

ANSWER.—The Journal has shown that I put down day by day, what takes place on the farm. now I wish all my culture accounts and others to be only a repetition of the Journal in order of succession, and matters that may be easily verified.

Moreover I make it a point to transcribe every evening what I have inserted in my Journal during the day, which would be impossible, had I to wait until some work to commence to-day, and to last fifteen days, was completed, in order to put down in a lump its cost both in time and money.

Besides I do not see that it will take longer time to put down to the different

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Carrots
Turnips
Cabbage
Parsnips
Bran
Malt

accounts every article, and add them all up at the bottom of the page, than to write them on a separate sheet, add them together, and then enter only their sum total.

QUESTION.—On the 5th February you enter 280 loads of manure, of which only one-sixth is charged against the beet, is this article correct?

ANSWER.—It is quite certain that the beet will absorb more than one-sixth of the manure, but as it is difficult to determine the quantity of nourishment that each crop in a six year's rotation will take from the manure that was laid on the fallow, to simplify I give one-sixth to each crop. Were I to establish comparisons and make experiments, I should be more scrupulous and calculate in conformity with the rules of science.

QUESTION.—I understand the items of expenditure, now let us look at the receipts. How can you determine the value of the beet?

ANSWER.—All fodder which has no market currency, as green fodder, roots, and that eaten on the spot, like pasture, is estimated in comparing its nutritious value with fodder having market currency. Thus for instance, I pull up 160,000 lbs. of red beets; these beets don't sell in market, and their value has no current price, but I know 160 lbs. of beets to be worth 50 lbs. of good hay; hence my 160,000 lbs. of red beets are worth 50,000 lbs. of hay. Hence again I may easily ascertain the money value of my root crop.

The same plan holds good with carrots, turnips, rutabagas, parsnips, &c. All that is required is a knowledge of their nutritive value, and their relation to that of hay; now those calculations have been drawn up a long time since, by chemico agriculturists.

Here are some of those relations:

Are equal to..... 100 lbs. of good hay.

Barley straw,	average	200
Oats “	“	225
Wheat “	“	275
Rye “	“	300
Leguminous plants cut green	“	400
Pastured grass	“	200
Red Beets	“	310
Rutabagas	“	300
Carrots	“	275
Turnips	“	450
Cabbage	“	500
Parsnips	“	250
Bran	“	60
Malt	“	120

(SECOND EXAMPLE OF CULTURE ACCOUNTS.)

FIFTH PART.**PASTURE (50 ACRES.)**

Dates.	PRODUCE.		Dates.	EXPENSE.	
From May 20th	to July 15, 11 horses pastured in 1st and 2nd field, 20 acres...	£ s. d.		Rent of all fields of said part,.....	£ s. d.
From May 20th	to July 15, 5 heifers, 3 years old, and 9, 2 years old, pastured in the 3d field, 10 acres.	" "	May 20th.	Fence keeping in repair, 20 days work...	" "
From May 20th	to July 15, 120 sheep pastured in 4th and 5th part, 20 acres....	" "		1-6 manure given over to fallow,.....	" "
From May 20th	&c., &c.....	" "		&c. &c.	
	Total produce.	" "			
	Expense being	" "			
	Profit is.....	" "			
				Total expense.	

Explanation of above table.

QUESTION.—How can you value pasture grass in this account, it is the only item I do not understand?

ANSWER.—I argue from a comparison of grass to hay—thus:—11 horses have been kept upon 20 acres of pasture ground, what quantity of hay would it take to keep the same number of horses, in the same condition for the same length of time? You make up the calculation and estimate the grass at the same price as you would the hay supposed to have been consumed in the stable.

It is true that the grass gives less trouble than hay, but there is compensation, because in pasture manure is as it were lost.

After all our accounts cannot be as rigorous as those of a bank, but it is a great deal to know to within three or four dollars more or less, what profit can be derived from 20 acres of pasture.

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QUESTION.—When valuing fodder by comparison with hay, or when you charge to expense a given ratio of hay, do you follow the variations in market prices?

ANSWER.—Certainly, and I am no loser by so doing. When hay sells high, the meadow that produced it gains what the animal department which consumes it loses; I have in my purse a sufficient compensation, because I am producer and consumer at the same time.

In Europe they calculate an average price from the last ten years, in order to make writings uniform; but in America variations become too considerable and too frequent to allow such calculations.

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CHAPTER 2ND. SECOND DEPARTMENT.

ANIMAL PRODUCTION.

(First example of account for this Department.)

COW-HOUSE AND DAIRY.

MONTH OF JULY.

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	PRODUCE.				EXPENSE.			
		£	s.	d.		£	s.	d.
	" Butter sold to store.				Decrease in value of animals			
	" Cheese do.				Interest of capital representing the value of cows..			
	" Skim milk sold to pig-gery				Rent of cow-house			
	" Calves sold to young stock branch				Litter, " bundles of straw paid to store			
	" Manure made over to store				Pasturing 14 heads in 12th field of Sole 4th.			
					Additional vegetables, fodder			
	Monthly amount .....	..	..	..	Tending and milking....			
	Expense being .....	..	..	..	Rent of dairy and utensils for it			
	Profit is .....	..	..	..	Veterinary attendance and medicines			
					Cheese and butter making			
					Keeping up buildings and furniture			
					Total monthly expense.	"	"	"
					N.B.—All the above calculations are made up for one month only.			

Explanation of foregoing Table.

QUESTION.—I understand the items 1, 2, and 3 of receipts, but the 4th viz; sucking calves sold to young stock branch requires explanation; will you tell me why the young stock branch purchases calves from cow-house?

ANSWER.—I have already said that in order to render a strict account of the merits of any particular branch of farming, it is absolutely necessary to isolate it and determine well the relations it may have with any other branch, and especially the point where one commences and the other terminates; this is what is shewn in this 4th item.

The sole business of the cow house is to convert fodder into milk, calves and manure; if you make it bring up calves, it is encroaching on the business of the raiser of stock; when therefore calves are produced, the cow-house keeps them for a month or six weeks only, till they are fit for the butcher, to whom or to the raiser of stock they are then sold, to be paid for at once.

In the same way with the skim-milk, if it is not made into cheese, (the dairy with its produce in butter and cheese, is put to the cow-house account) its value should be paid to the cow-house when it is made over to the Piggery; so also with the manure, when it goes from the cow-stable to the store.

Whether the calves be well or badly reared, whether the piggery turns the milk consumed to profit or not, or whether the manure is made bad or good use of, it matters not to the cow-house; it has done all that it had to do, to produce the greatest possible quantity of these three articles. If therefore the farm does not prosper, let not the farmer lay the fault to the cow-house, but let him examine well if there be not some other branch which does not pay its expenses.

The next item is now explained. I have one remark only to make, in order to keep as much as possible within the truth, a fair and reasonable price should always be given for the produce of each department, unless this be done, there is great risk that false notions will be entertained of the merits of each. Thus for example, if too high a price be put upon the milk, the calves, and the manure, the revenue of the cow-house will certainly be increased, but it will be at the expense of the piggery, the raising stock branch, and the fields which receive the manure, each of which will have a charge upon it greater than it can meet. I grant that in the general result there may be a balance in favor of the farmer, but he will fall into error touching the merits of one or other of these branches of his business.

QUESTION.—The markets regulate the price of butter, calves, cheese, &c., but not of manure; how then do you propose to establish its value? In America I think you will have some difficulty in doing it.

ANSWER.—I have just stated that it is absolutely necessary to establish correct relations between the value of manures and the value of the grain and fodder which they are to aid in producing; it is upon this principle that I make my valuation. For this purpose, I have only to take a term of comparison from the countries of the old world, where manures have

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regular current prices, such as England or France, and then I reason thus : if a bushel of wheat is worth six shillings in France or England, and only worth five shillings in America, a cart load of dung weighing 1000 lbs., which in England is worth two shillings, will be only worth 1s. 8d. in America, that is to say, the relative value of dung and wheat will be as 5 to 6, it cannot be otherwise, in farming as in manufacturing, there is a relative value between products and the original substances from which they are chiefly formed.

QUESTION.—I read in the first item of your expense, *decrease* in the value of animals. What do you mean ?

ANSWER.—There are 14 milch cows in my cow-house, each worth at this moment \$25, being young and good. I may keep them 8 or 9 years, so long as they yield me a good profit ; but when they have reached an age at which the milk falls off considerably, they must be got rid of and it is quite certain that they will then be of less value than they are now. If then instead of getting \$25 a piece for them, I sell them for \$15, or hand them over at that price to the fattening department, there will be a loss on each of \$10 ; it is only fair then that I should debit my cow-house each of these 8 or 9 years with a quota of this difference ; but as it is not easy to determine what this difference is, because it is impossible to foresee what may happen to these animals during the 8 or 9 years, I have adopted an average, which long tried experience has proved to be one twentieth of the capital for each year including accidental losses.

QUESTION.—The second item in your expense is 6 per cent. interest on the capital representing the value of your cows, why is this ?

ANSWER.—My cows have cost me \$25 each, or \$350 the whole number, is it not fair then that I should charge to the expenses of my cow-house, the interest on this money, which placed in a Bank, would bring me equal interest without the slightest trouble on my part.

QUESTION.—Why do you charge two dollars a head per month, for rent of buildings occupied by cows ?

ANSWER.—Have these buildings cost me nothing ? they have indeed cost a pretty round sum ; why then should I not make my cows pay the interest on this capital, which placed elsewhere might be more profitable to me.

The item of Dairy rent is similarly accounted for.

QUESTION.—Is it necessary to be so very particular in farming accounts ?

ANSWER.—It is impossible to be too strict where one's fortune is concerned.

It is from not attaching sufficient importance to all these details, that many farmers taking the price they get for their butter, cheese, &c., as clear profit, are imperceptibly led on to ruin by means of a branch of industry on which they counted to make their fortune. For the most part as enthusiastic as they are improvident, one would say that they strove to conceal from themselves their misreckonings and mishaps. They tell you with no small pride that their cows bring them in so much a year, mentioning some exaggerated amount, but if you ask for a proof of their assertion, they have no book to show, they keep no accounts, they do not even know the quantity of milk they get from their cows.

QUESTION.—The 5th and 6th items, are easily understood, particularly after the explanation given touching the valuation of fodder, in the chapter of "vegetable production." The 6th item is "tending and milking cows," this appears to me difficult to ascertain correctly?

ANSWER.—In order that the accounts may be strictly kept, the cost of each workman must be calculated by the month, by the day and by the hour; it will then be very easy to find a price for the time employed in Cow-house, if it is only for one hour during the day; and as this service should be regular and without variation, the calculation of time employed in it once made for a day or for a month, will answer for every day and for every month.

The other items of expense explain themselves; any explanation therefore on my part would be superfluous, let us proceed to another account for 2d department.

(Second Example of Account for Second Department.)

YOUNG STOCK.

6 Heifers 3 years, and 92 years old.

PRODUCE		EXPENSE	
The produce of this branch consists of the increased value of the 6 heifers 3 years old, which I rate at.....		Interest of the capital of those heifers as charged in the last Inventory	
And that of the 9 heifers two years old, which I rate at.....		Cowhouse for 1 year's rent, From 1st October the 20th May, fed in the stable at the rate of 20 lbs. hay, 10 lbs. barley straw, and 4 lbs. of the meal of peas and oats mixed, per head, 3 years old, and per day,.....	
And "loads manure stored up, being worth,.....		Straw for litter,.....	
		Same period, beasts 2 years old, at the rate of 15 lbs. hay, 10 lbs. oatstraw, and 2 lbs. of the meal of peas and oats mixed,.....	
		Straw for litter,	
		From 20th May to 15th July, pasture of 2 years and 3 years beasts in 3rd field of 4th Sole,.....	
		Tending, &c., &c.,.....	
Total receipt...		Total expense....	
Expense being.....			
Profit is.....			

Explanation of above Table.

QUESTION.—This account is analogous to the cow-house account, only it is closed at the end of the year, whereas the cow-house account is balanced each month; will you tell me why?

ANSWER.
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explanation

Dates		
1		1
2		1
3 S		
4	1	1
5	1	1
6	1	0
7	1	0
8	1	0
9	1	0
10 S		
11	1	1
12	1	1
13	1	1
14	1	1
15	1	0
16	1	0
17 S		
18	1	1
19	1	1
20	1	1
21	1	1
22	1	1
23	1	1
24 S		
25	1	1
26	1	1
27	1	1
28	1	1
29	1	1
30	1	1
31 S		
Total	22	20
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ANSWER.—We may easily calculate per month, or even per day, what quantity of milk and manure a cow may yield, but it is impossible to determine what a young beast gains in growth each month; it is difficult enough to ascertain its increased value at the end of the year, if it is not then fit for the butcher or does not give milk, because it has no current price in market, yet a little practice may enable us to determine the approximate value.

All the accounts for the animal department are pretty much alike, so that my explanation concerning the cow-house should suffice for all that section.

CHAPTER 3RD, THIRD DEPARTMENT.

LABOUR, TEAMS, AGRICULTURAL IMPLEMENTS.

(An Example of Workmen's Account.)

LABOUR ACCOUNT.

MONTH OF JULY.

Dates	PRODUCE IN LABOUR.					EXPENSES.		£.	s.	D.
1		1	1			Francois, whose wages are £4 per month; through sickness he worked only 22 days, 8s. 7½ each,.....				
2		1	1							
3 S										
4	1	1	1	1		Louis is paid at the rate of 80s. per month, but having lost 6 days, through his own fault, there is only due to him, (which makes 3s. a day that he has cost,).....	4	0	0	
5	1	1	1							
6	1	0	1							
7	1	0	1		1	Mary is paid £3 per month, (each working day cost 1s. 6½d., Joseph, day labourer, has worked 4½ days, at 2s. 6d.,.... Gilbert ditto, 7 days, at 2s. per day,.....	3	0	0	
8	1	0	1		1					
9	1	0	1		1					
10 S										
11	1	1	1				2	0	0	
12	1	1	1							
13	1	1	1							
14	1	1	1		&c.					
15	1	0	1				0	11	6	
16	1	0	1				0	14	0	
17 S										
18	1	1	1							
19	1	1	1	1	1					
20	1	1	1	1	1					
21	1	1	1	1	1 &c.					
22	1	1	1							
23	1	1	1							
24 S										
25	1	1	1							
26	1	1	1	½						
27	1	1	1							
28	1	1	1							
29	1	1	1							
30	1	1	1							
31 S										
Total	22	20	26	4½	7					
Pris.	4	3	2	11½	14					
Francois, hired man.										
Louis, do.										
Marie, do.										
Joseph, day labourer.										
Gilbert, do.										
&c.										
Total produce,.....					105					
Total amount of expense...							10	5	6	

ount, only it is
s balanced each

Explanation of foregoing Table.

QUESTION.—Will you allow me to ask for an explanation of the above account, I do not understand it very well?

ANSWER.—You see on the expense side of the account what the work people cost by the month for every day's work that they give, these days detailed one by one form the Chapter of Produce. In the same chapter, below the total of days' work, you see the price given and the sum of prices of all these days constitutes the total receipt of this account, or the money value of the whole monthly produce.

QUESTION.—And who pays the money representing the men's labour?

ANSWER.—Each branch that has employed them. In the accounts of the two former departments you have seen strictly recorded all the time required for their operation; well it is the same time, the same days that you see here again. Whenever I carry the items of my journal to the ledger, after charging the different branches with the number of days each has required, I put the same days to the credit of labour account.

Here I should make one remark which is also applicable both to the account of working beast and to that of implements, viz: that the farmer having the three departments in hand is not at all interested in realising a profit in the accounts of 3rd department; whereas it would be quite the reverse, were the 3rd department carried on by an individual who made it a separate business. Thus were the agriculturist to make it a point to realize a profit from his men, his horses, and his implements, he would be obliged to make the other two departments pay a higher price for labour than the labour really cost him, and the profits of each of these two departments would be diminished by the excess which constitutes the profits of the 3rd. There would be compensation indeed, but erroneous results in the accounts of the two former.

The farmer's only care should be, in the three accounts of the third department to balance expenses with receipts, and to charge to the labour accounts of animal and vegetable produce, what the labour has really cost him.

QUESTION.—You might it seems to me, simplify this account, by putting down only the day labourers' time; why do you detail that of hired men?

ANSWER.—The farmer should know day by day, what time has been spent by each hired person at labour, that he may value each day's work, and so charge the right cost to each department.

Thus, Francis (See Table) is hired at 80s. per month, board and lodging included. To ascertain what this man costs each day, it would be an error to divide 80s. into 31 days, but I look at the column above Francis's name, where I perceive in the first place, five Sundays, then four crosses, showing four days lost (in consequence of sickness or any other cause independent of the man's will) in all nine non working days; this reduces the number of working days to 22. It is among these 22 days that the £4 must be divided, which will give 3s. 7½d. for each, whereas I should have a much smaller sum had I divided it among the 31, and consequently a great error in my accounts for cultivation, which would

not be charged really cost.

QUESTION

ANSWER.—I deduct from sickness or him. More enables you

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Dates.	PRO
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27	
28	
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30	
31	

Total of days

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not be charged with what the time employed in the operations of the farm had really cost.

QUESTION.—What do those six ciphers in Louis' column mean?

ANSWER.—They show that, through his own fault, he has lost six days which I deduct from his account; had he like Francis, lost them in consequence of sickness or any other cause independent of his will, I would make them good to him. Moreover this detail of hired persons time, when you settle with them, enables you to see at one glance, what portion of it they have lost.

Finally the exact account of hired men's time, serves as a standard to determine whether it is preferable to keep them by the year or to take day labourers in place of them.

EXAMPLE OF TEAMS ACCOUNTS.

ACCOUNT OF WORKING BEASTS.

EIGHT HORSES.

MONTH OF JULY.

Dates.	PRODUCE IN DAY'S WORK.				EXPENSE.				
1	8	£	s.	d.	Interest of first cost of horses.....	£	s.	d.	
2	6				Decrease of horses value, £10 0s. 0d..				
3	—				Labour of tending stables.....				
4	6				Stable rent.....				
5	0				Hay taken out of store 4800lbs.....				
6	8				Straw do.				
7	4				Bran do.				
8	8				Oats do.				
9	6				Flour do.				
10	—				Veterinary surgeon.. ..				
11	8				Keeping harness in order and repair..				
12	8				Decrease of value in do, &c, &c,....				
13	8								
14	4								
15	6								
16	4								
17	—								
18	6								
19	4								
20	8								
21	8								
22	8								
23	6								
24	—								
25	4								
26	8								
27	8								
28	8								
29	6								
30	8								
31	—								
Total of days work 166 rated at.					“ “ “	Total Expense.....			“ “ “
Manure rated.....					“ “ “				“ “ “
Total produce.....					“ “ “	Equals expense.....			“ “ “

Explanation of foregoing Table.

QUESTION.—Can you explain this account?

ANSWER.—What has been said about workmen's account should be a sufficient explanation of this.

Every time that a horse is made use of, I charge the price of his day's work to the expenses of the particular service in which he was employed, and I credit the horse account with the amount. The number 166 which you see at the bottom of the column of the working days, expresses the total of those days, the value of which joined to the value of the dung ought to make up the whole expense. At the end of the month, to know what each working day has cost, you must, from the sum total of the expenses, deduct the value of the dung, and divide by 166 that is to say by the number of the working days. It is necessary to detail thus the working days of the horses, to be able to charge each branch with its exact outlay. This outlay varies more for the horses than for the men, because, according to the seasons, the former are used more or less, whilst the men have always something to do.

The farmer ought to reduce as much as possible the number of his horses, because when they remain in the stable the expense is going on, while their produce is nothing unless it be the dung; however, he ought always to have enough to be able to get his work done in due season; but that to which he ought to pay the most attention, is to reserve for bad weather the indoor work, for instance, the thrashing of grain, by which the horses may be able to earn part of the cost of their keep.

Touching the chapter of expenses in this account, I would remark that many writers on agriculture to avoid the detail, make very minute calculation in order to ascertain *about* what a horse costs his master every day; for my part, I am satisfied that these calculations cannot be exact for every country, on account of the great difference that exists in the price of produce: then large horses consume more than small ones; those that work hard more than those that remain in the stable: again, how is an exact account to be kept of absence, sickness, &c., it is much better then to account month by month what a horse really costs; one cannot be too strict in this matter. Any one who only calculates nearly instead of exactly for his teams, his men his expenses in general as well as his receipts, will find himself in darkness and doubt at the end of the year.

When you employ oxen instead of horses for the farm work, you take from the expense account, the article *diminution of value of animals*, and you add to the produce account an item for the increased value that the oxen might acquire during the year—generally an ox increases in weight and value by doing this work.

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FARMING IMPLEMENTS AND UTENSILS ACCOUNT.

QUESTION.—Will you give some explanation of this account?

ANSWER.—With the implements and utensils, we proceed in the same manner that we did with the work horses, the farmer should carry to the account of receipts the days on which they are used: the expense account is debited 1st, with the interest of the capital which represents the value of implements, utensils, &c., in the inventory: 2nd. with one-tenth of this capital, calculating that this is the deterioration which takes place in each year: 3rd. with cost of repair and keeping in order. These three items constitute the whole expenses which must be balanced in the receipt account by an equal sum, divided among the different branches which have made use of these articles.

QUESTION.—How do you make out the produce chapter of this account?

ANSWER.—In order to keep this account, and those of labourers and of working beasts, it must be remembered that the farmer in this case is to be considered as a man who lets for hire men, horses, and implements. Well, what would the man do who lets out implements? He would divide his stock into three classes: 1st, Agricultural implements properly so called, such as ploughs, harrows, &c.; 2nd, carts and waggons, &c.; 3rd, machines that are worked within the buildings, as thrashing machine, chaff cutter, &c.; then as in the case of days work of teams, he will have a separate column for each class, in which he will mark the days on which the different implements have been employed; thus suppose that on the 1st of May, 2 harrows, 3 ploughs and 1 seed drill were made use of, he will put down 6 days work in the column of implements of the 1st class. The days work of tools, such as shovels, spades, picks, &c. are left to the end of the year, and then charged in a lump. The chapter of expenses is divided in the same manner in 3 columns, in which the expense of each class is entered separately.

QUESTION.—Why are these classes established, is it not going into great detail?

ANSWER.—The cost of wear and tear of the implements which have been made use of during the year cannot be ascertained till the end of it; it is true that the number of days usage has been put down to each branch, but no money value has been assigned to these days usage. How it is possible then in settling the accounts to determine this value without classifying the implements; the fields might very likely be made to bear the expense which should properly fall on the animal department, and vice versa.

NOTE.—The second book being 14 by 9 inches in surface, should consist of 220 pages.

THIRD BOOK.

CURRENT ACCOUNTS.

The Cash Account.

QUESTION.—Will you give some explanation of this account?

ANSWER.—In agriculture the cash account has not, as in a Bank, for its only aim, to balance each evening the money received and the payments made during the day, and to establish the amount of money and bills which remain on hand. In a farm many days and even weeks pass, especially during the winter, without any receipts or payments, thus the cash account is often stationary. With many farmers it would even be useless, if they had not principally in view to unite in one account all the sums paid or received, and in this way facilitate considerably the researches for settling either with the workmen, the tradesmen, merchants, and people who have not always good memories or very well kept books, and with whom it would be too long to open a separate account.

The Blacksmith, Saddler, and other Tradesmen's Accounts.

However if workmen not belonging to the farm, such as the saddler, the blacksmith, the wheelwright, &c., and the tradesmen and merchant, have important business with the farm, it would be necessary to open with each a separate account.

These accounts are composed of one side called the Dr. side, on which are entered all the sums paid, either in cash or in produce to the individual with whom the account is opened, or due by him, and of another side called the Cr. side, which includes all the sums due to that same person either in money or produce. The balance of these particular accounts is made when the parties settle together. All these accounts are too easy and too common to make it necessary to give ampler details about them.

House Keeping Accounts.

In order to regulate the expenses of his house, the farmer ought to open a separate account with his household. This account is only one of expenses, because the family consumes and does not pay. The farmer, his wife, and his children find the payment of what they expend in the surplus of produce which their activity, their care, and their economy procure them. The expenses of the household might be balanced by the value of their labour, but what need is there for it? Besides in a large farm, the work of the master is only to superintend. The household account has then no other object but to regulate the expenses of the family, to prevent waste and verify the store accounts.

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The household ought to live on the excess of the products over the expenses, that is to say the profits, but if the household spend any of the capital, the farmer should immediately try and make a change, and it is only by a minute household account, that he can escape the evil which threatens him with ruin.

How many farmers very industrious, very active, obtaining magnificent results, have been ruined by the want of order in the family, by its extravagance, and sometimes by the kitchen alone, a real abyss which swallows up the provisions in store, the money in the safe, and the future comfort of the family.

When the servants of the farm are boarded by the farmer, he has no occasion to open a special account for them, they are included as a part of his family in his ordinary household expenses, and at the end of the year he makes a deduction of their cost of board at so much per head, per diem. Every farmer who is at all accustomed to rural life knows every week what each servant consumes per diem. Any one who has never made the calculation, can by keeping an account for a month acquire enough experience, to render it unnecessary for him to open a special account for this.

General Expenses Account.

This account includes all expenses incurred for the general good of the farm, and not assignable to any particular department, as taxes, road repairs, &c.

The total of these expenses must be deducted at the end of the year, from the total receipts of the farm, otherwise the clear profit would be exaggerated.

Soil Improvement Account.

This account is divided into two Chapters, viz: *Expense* and *Produce*.

Expense extends to all labour performed, with a view to improve the soil, that is to say, the effect of which will last a long time, such are draining, plantations, sinking, buildings, &c.

Produce includes all sums representing the increased value given to the soil by each improvement.

It may be well to observe here, that when these improvements are carried on wholly or partially by the farmer himself, with his own teams and implements, he must not forget at the end of the year to carry the amount of this work to the receipts of the season, during which they have been executed, otherwise he will make the crops of the year pay for an outlay which should be considered as capital added to the original purchase money, the interest of which only should be paid for the future by the produce. Works carried on with a view to permanent improvement, must not be confounded with those which have for their object immediate and periodical revenue.

Store Accounts.

We have stated the nature and use of Store Accounts. They are three in number, 1st., for grain and fodder, 2nd for manure, and 3rd, for animal produce, and are kept according to the following table :

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(Example of Store Account for Grain and Fodder.)
GRAIN AND FODDER STORE.

ENTRIES.	GRINDING.		GRAIN.		ROOTS.		HAY.		STRAW.		Prices of articles entered.	OUT GOINGS.	GRINDING.		GRAIN.		ROOTS.		HAY.		STRAW.		Prices of articles taken out.			
	Flour.	Bran.	Indian Corn.	Peas.	Barley.	Wheat.	Oats.	Potatoes.	Red Beets.	Carrots.			Luzerne.	Timothy and Clover.	Peas.	Barley.	Wheat.	Oats.	Potatoes.	Red Beets.	Carrots.	Luzerne.		Timothy and Clover.	Peas.	Barley.	Wheat.	Oats.
DATES.																										
July 20, entered 25 thousand hay (Timothy),								25,000.																		
" 21, " 12 Thousand hay (Timothy) (1),								12,000.																		
August 19, 14 loads oats, whose straw on an average may be 14,000.																										
September 24, 40,000 lbs. red beets.							40,000																			
December 19, threshed 190 B. barley,					120																					
January 3, stored in lbs. bran, and lbs. flour, out of 20 B. wheat,																										
etc., etc.																										
Total.....																										

(1) The reader need not look for any connection between the different accounts contained in this work; the author having in contemplation merely to bring under notice those cases which offered some difficulties, has not attempted to make either his accounts or the items which form each of the examples accord.

(Example of Store Account for Grain and Fodder.)

These explanations also apply to store accounts of produce from second department, which are kept in the same way.

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Account of other Produce Store.

In the store accounts of other produce, one column must be left for each sort, butter, cheese, pork, &c., the same as in the grain and fodder account.

Account of Manure Store or Depot.

This account is kept as follows :

At each cleaning of the stables, you *enter* the number of loads produced from the divers branches of animal department, and opposite every entry put the price paid by the store to each branch. It is needless to observe that each kind of manure should have a separate column. On the opposite side is put down every load of manure supplied out of store to any field whatever, and on the same line the price paid by the field.

Whereas heaped up manure decreases much in size, the number of loads carted to the fields is far below the number of fresh manure as it comes from the stable, the difference of price must therefore be in proportion to the difference of quantity. If for instance, 20 loads heaped up decrease by one fourth in size, the 15 remaining loads should be paid by the fields which receive them, the same price that the store paid for the 20 to the various branches of the animal department, otherwise the store would suffer a loss which it should not do from any unavoidable decrease.

This account carefully kept, amongst its other advantages, has the great one of cautioning the farmer to take care of his manure and of showing him that if he allows it to waste or deteriorate, he must necessarily expect a deficiency in his store account or in that of cultivation, if he establishes as has just been said, a balance between the value of entries and outgoings, even for these deteriorations arising from his own fault.

Closing of accounts at the end of the season.

The object of this operation is to ascertain the profit or loss during the past year.

With this view, an account must be made out, the credit to consist of, 1st. the profit derived from every department of animal and vegetable produce ; 2d. the increased value, if any, of farming tools, which will be ascertained by the inventory ; 3rd. the increased value of the soil, in consequence of large improvements, this may be ascertained from the "improvement accounts" and the inventory : 4th. work done during the season just over, in advance for the next, such as preparatory ploughing, sowing &c., which is stated in the inventory. The debit will consist of, 1st. the deficit of the various departments, whose expenses may have exceeded their receipts ; 2d. the loss by wear and tear of tools, &c. ; 3d. the decreased value of soil in consequence of bad cultivation, if there be any decrease, which latter articles are stated in the Inventory.

All other accounts, cash, household, or store, have nothing to do with this one ; in fact the profit or loss of a year's farming does not result from the quantity of produce either converted into cash, consumed or put into store, but only in the excess of money received for this produce, over the expenses incur-

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red in obtaining it, a fact which can be established only from the accounts of the first two departments, and by those which prove that part of the works and of the outlay has been converted into capital by soil improvements or additional implements.

QUESTION.—At what time of the year ought the accounts and books to be balanced?

ANSWER.—The operations of the farmer are so linked together that there is never any interruption, and it is almost impossible to fix any time, in which the coming year would not benefit by the labour of the last. Nevertheless, the close of autumn (the 1st November,) is the most favorable time to balance them, because at this time the operations of the passing and of the coming year are well divided, there being only the preparatory autumn ploughing and the winter sowing, which have been anticipated by the passing year; in order that these operations may not be confounded or mixed with those of the current year, all that is necessary is to prepare the books intended for the next season, and to charge to its account each of these preparatory works, taking care that they are credited to the past year.*

Recapitulation.

Finally, this system of book-keeping may be summed up as follows: 1st. Separate as much as possible the different branches of the two departments, vegetable production and animal production; 2d. Maintain this separation by store accounts kept regularly; 3rd. Never omit to put down the smallest work, the least loss of time, the smallest portion of fodder, in fact the smallest outlay, to the account of the department to which it relates; 4th. And never insert in the Ledger or the current account book any expense or receipt until it has been entered in the Journal.

QUESTION.—Your farming accounts seem to be clear and correct, but you will admit that they require some study, and in order to put them in practice, a good deal of office work, which is very often incompatible with a farmer's daily occupation.

ANSWER.—Can Merchant's book-keeping be learned without study? Now, if you will reflect one moment, you will perceive that these accounts are not more difficult to be kept than to understand. In fact all the work they require is as follows: At the beginning of the year, you establish in the books which I have described, the necessary divisions with proper heads; this may take at the most two days. When once your form is traced out, what remains to be done? Every evening you insert in the Journal the doings of the day, now that can be written in ten or twelve lines, and in less than a quarter of an hour. On Saturday evening, you carry to the two other books all the items of the Journal (what concerns the cash book should be carried every evening) for the week; at ten or twelve lines a day, your Saturday's work will be the transcribing from seventy to eighty lines. However as some items must appear in various

* The third book being 14 by 9 inches in surface, should consist of 160 pages.

accounts, let us put this at 100 lines. Well, what great length of time will it take to write these 100 lines; I think about three hours would be sufficient; thus you see that the whole time occupied in keeping these books is about five hours a week, and if it were six would these six hours be lost?*

You hesitate not to venture your all upon a doubtful speculation, which may ruin you in a short time; you do not consider it too long to drain your soil, to plough, harrow four or five times, to manure, to sow, to hoe plants, to employ many laborers in taking up your crops, and storing them then conveying them to market, when you do not convert them into meat, to be sold only after three or six years of care, trouble and expense; and you find too long the few hours which should be devoted every week to accounts, which can alone put you in the right path, warn you of your faults, and enlighten you as to the merits of your operations.

When a merchant or a manufacturer on the very smallest scale keeps accounts to negotiate his little affairs, shall a man who has the charge of operations so numerous, so important, and so various as those which are carried on on a large farm, look upon the time employed in gaining an insight into his affairs, as too long? No, be assured that the time spent by a farmer in accounting for his operations is far from being lost. When in the evening he opens his books, and at a glance sees all he has done and all that remains for him to do, serious and useful reflections will occur to his mind, which would never enter into the head of the man accustomed to work on in the dark.

Having before his eyes a faithful picture of the past, he may easily arrange for the future; that is, he may in the course of two or three years acquire more experience than a careless farmer will in twenty, or perhaps ever will.

* Of course an experienced farmer may, if he think fit, in practice simplify some of the operations mentioned in this volume—as in Arithmetical calculations, abbreviations are more often made use of than the system taught in scientific works, but it is only after long experience that we can trust to these abbreviations without danger.

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