

Essay 1.

Of the proportioned Farm, which is of all  
others the most profitable

By this enquiry we would discover if there be not a peculiar proportion between the parts of a farm, remarkably favourable to profit and convenience, that may be suitable to those of different extents.

The first division of a farm is into Arable and Pasture land.

The Arable requires draught Cattle to cultivate it and carry out its products; and the grass must be applied to feeding them as well as other Cattle.

The want of proportion is daily seen, by farmers often buying hay under disadvantages; by others purchasing oats with a heavy carriage upon them; by putting out to joint in a neighbour's straw yard the cattle, by which much manure is lost; some again cultivate turneps with great care and raise fine crops of them, but want cattle to feed them in the winter to advantage.

These instances are enough to witness the want of proportion.

In many situations the dependance of the whole farm for

manure

manure is on the straw yard; here if the farmer does not properly proportion his arable crops which feed his cattle, to those which litter the yard, and both these to the quantity of his grass fields, the farm cannot be kept properly manured.

Farms differ so much that absolutely accurate corollaries cannot be drawn from the most judicious reasoning on this subject; but by stating some points and reasoning upon the proportion between those and others.

If in stocking a small farm, twenty acres of arable land per horse is the quantity to be managed properly by the team; four horses will in that case cultivate eighty acres of arable land.

Eighty acres of arable land if the soil is not too heavy ought to be divided into fourths,  
one fourth sown with turneps.

another with spring corn.

another with wheat

and the fourth with Clover.

If the soil is heavy a fallow or some other fallow crop should be substituted instead of the turneps; if a fourth be not clover, the four horses cannot manage the farm properly.

From hence new proportions arise; the Clover totally keeps the horses in green food and hay.

We will allow each horse two tons of hay per winter, which leaves a little for summer; the four therefore eat eight tons; this

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at two mowings may be reasonably called four acres.

For the Summer food we will allow them six acres of green clover, thus the whole quantity is ten acres.

With the other ten acres other cattle must be kept; but besides there are twenty acres of Wheat, twenty of Spring Corn and twenty of turneps; with twenty acres of stubble for littering the yard.

Part of the straw of the Wheat must be applied to littering the four horses; the rest given to the cattle.

For Winter food there remains

twenty acres of turneps.

twenty tons of Clover hay.

twenty acres of Spring corn straw.

The next enquiry is the cattle these will winter; the food is well adapted to various, but shall here be supposed heifers, or steers, or oxen for fattening.

They should feed first on the Wheat straw with some turneps; then on the Spring corn straw with some turneps; and then on the clover hay with the rest of the turneps, which progression will carry them forward in flesh, and get them in fine order to turn into grass to complete the fattening.

Thirty middling steers would be well wintered on this food.

Each beast requires an acre of grass land, consequently for the above number thirty acres; and that there may be a stock of hay in case of accidents; the farmer should have five acres

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of mowing grass, or in all thirty five acres.

Having thus explained by an instance what is the proper meaning of the proportions of a farm; we shall next proceed to sketch such proportions as we judge the most profitable.

We shall suppose a farm containing many parts, and conducted on a various plan, embracing some new discoveries in agriculture, but at the same time it shall be of use to those who may reject any of the articles of culture not absolutely usual.

To have every thing complete and well contrived for mutual support, a farm must necessarily be large.

Six ploughs should be kept constantly at work; four Ox ploughs, and two horse ones or four horses and eight Oxen.

One pair of harrows must be always supposed to attend these ploughs, or three horses.

On extraordinary occasions one of the ploughs may stop for the working another pair of harrows; but these will only be in a hasty time, when the corn is laid in above ground instead of under furrow.

One horse must be assigned for rolling, two for ploughing between the rows of plants.

Four others should be allotted for bringing manure from the nearest city or town where that is practicable; but this team must be employed in carrying out the corn and other products of the farm, except when the horses assigned to the  
business

business of tillage are idle through bad weather.

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Four Oxen must be allotted for sundry articles of carting, such as wood, food for cattle in winter, stubble straw &c.

Two Oxen should the whole year cart in two small three wheeled carts dung, clay, composts &c.

This allotment would be too small, were not the tillage horses to be set to this work at all leisure times.

Two horses ought to be kept extra.

By this disposition of the teams, none of the work will stand still.

The six ploughs at the rate of each doing an acre a day for 300. days will amount to 1800. acres ploughed once.

But least objections should be made against the allowance of only 13. days idleness, besides Sundays, we will suppose the ploughs move 270. days in the year; those teams to be employed by reason of frost or excessive wet 30 days one other work; and to be a totally idle 13. days.

This working 270. days amounts to 1620. acres that is

160. acres ploughed six times for turneps	960.
160. three times for spring corn.	480
160. once for wheat.	160.
160. of clover one year old	
160. do two years old.	

400. of arable land 1600.

Or there may be only one clover crop, then the arable land will amount to 640. acres.

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A farm to be managed by a team that ploughs 1600. acres annually might be planned many other ways, of which we will state a few.

100. acres six times ploughed for turneps	---	600.
100. thrice for spring corn.		300.
100. once for wheat		100.
50. thrice for potatoes.		150.
50. six times for cabbages.		300.
50. twice for wheat		100.
50. once for spring corn.		50.
100. of clover one year old		
100. D <sup>o</sup> . two years old		
100. of Lucerne, sainfoin, and burnet		
<u>400.</u>		<u>1600.</u>
100. of wheat once ploughed	---	100.
100. barley thrice		300.
100. oats twice		200.
100. turneps five times		500.
100. cabbages five times		500.
100. of clover one year old		
100. D <sup>o</sup> . two years old.		
<u>700.</u>		<u>1600</u>

But we shall adopt the following as rather an improvement on the second.

100. acres of wheat once ploughed	---	100.
100. of spring corn thrice	---	300.
100. of turneps five times		500.
50. of wheat twice.		100.
50. of pease twice		100.
50. of cabbages five times		250.
<u>450</u>		<u>1350.</u>

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450. acres		
50.	of potatoes three times.	1350.
50.	of carrots twice.	150.
50.	of Lucerne	100.
50.	of sainfoin	
20.	of burnet	
100.	of Clover one year old	
100.	Do two years old.	
<u>529.</u>	of natural grass.	
<u>1359.</u>		<u>1600.</u>

I must remark on this arrangement that the common crops are infinitely beyond the uncommon ones, so that were it followed the cultivator would have no reason to dread the trial of vegetables not every where used.

The stating schemes of conducting farms without regarding modern improvements would be ridiculous. Sainfoin, cabbages, potatoes, carrots, are not common crops in every part of England like wheat and barley, but every one of them are practiced in one or other part of the Kingdom.

Cabbages are at present more confined than sainfoin, but no vegetable can have greater merit; it supplies the place of turneps, and in heavy soils exceeds them.

Lucerne meets with great success on various soils.

Burnet is proper for feeding sheep late in the spring, but not equal to clover, sainfoin, or lucerne for other uses.

But to return

The arrangement of crops in the preceding sketch, is so disposed that the farm must always be clean and in good heart, independently of manuring.

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In 750. acres in tillage, only 300. are corn, the rest ameliorating crops, that clean and enrich the soil, such as clover, turneps &c. This should never be neglected; a good farmer ought never to sow corn on an uncertainty.

The chief article of all husbandry is the keeping great stocks of cattle, without which there cannot be much corn.

We will now proceed to draw forth the general economy of this farm from the particulars already given.

The stock of draught cattle amounts to sixteen horses, and fourteen oxen; though they have been divided into teams for distinct business which is necessary, mutual exchanges must at times be made.

The thirty head of draught cattle may be allowed 24. acres of clover and 24. of grass for their summer food, and perhaps 30. acres (batons) of sainfoin hay and five of grass for the winter; the quantity of food therefore that remains.

100.	acres of turneps.
50	of cabbages
50.	of potatoes
50.	of pease
50.	of carrots
50.	of lucerne
20.	of sainfoin
20.	of burnet
176.	of clover

We choose to keep a variety of cattle for this food