

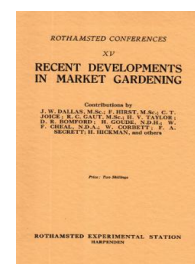
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C. T. Joice (1933) *Changing from Farming to Market Gardening* ; Recent Developments In Market Gardening, pp 26 - 30 - DOI: <https://doi.org/10.23637/ERADOC-1-208>

CHANGING FROM FARMING TO MARKET GARDENING

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I SHOULD think most people here know what the "Norfolk four course system" means, and I should like to say that system has served Norfolk generally, and my district in particular, very well during the last century. All the principal landowners made it part of their tenancy agreements that the rotation should be strictly adhered to; any part of the consuming crops sold had to be replaced by artificial feeding stuffs or manures, and a complete record of cropping had to be kept, and if two successive white crops (corn) were taken the tenant was fined for dilapidation. This rotation was Wheat—Roots—Barley—Hay. It will be seen that this rotation of cropping meant two cash crops and two consuming crops—in other words, half the arable land was in cash crops. As I have said, that system served my county well while prices of corn and meat were fair in comparison with the costs of production. I must explain what I mean by my district. Take a line from Cromer through Aylsham and Wymondham and on to the south boundary of Norfolk, and on the other side a line from Lynn to Hertford. The extreme east and west portions of the County of Norfolk are far more productive, and it is not necessary there to feed the crops on the land; in fact, if sheep are fed on some of the lands the crops are laid and almost ruined in consequence. So I call my district a poor one, and the old four course system served it well.

When, however, the prices of corn and meat fell, farmers were forced to alter their system of cropping to something more remunerative, and most farmers changed to a *five* course system, which allowed three corn crops in the rotation, barley or oats following the wheat crop. The five course system served my district well also.

By this time (1922) a good many farmers were growing sugar beet, which took the place of part of the root shift as a rule. In 1924 the price of barley was very good; the early sales of best barley in Norfolk were at about 80/- per quarter. I made 90/- of 150 quarters—so that although the sugar beet subsidy was in being in 1925, with a guaranteed price of 54/- per ton for beets of 15½ per cent. sugar content, the price and demand for barley in Norfolk the previous year made barley growing a better proposition than sugar beet, and barley therefore was sown rather than sugar beet in 1925, in spite of the Sugar Beet Subsidy Act.

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The further decline in corn prices from this time was causing farmers to turn more to sugar beet year by year ; the prejudice of the older farmers against it was gradually weakening ; one of their strongest arguments against the crop, that the crop was ruining the land, was being disproved on many farms by the more progressive farmers ; it was proved that cattle could be fattened as well on sugar beet pulp at a lower cost (especially for attention) than on swedes and mangolds. So the same quantities of cattle were kept. The straw was made into muck and the fertility of the soil maintained.

On the lighter lands, where it has always been necessary to sheep heavily for the barley crop, it had been the practice to leave one-third of the swede crop on good land and one half, or in some cases the whole, crop to be fed off with sheep on lighter lands ; this I have no doubt is necessary for maintaining the fertility of lighter soils and, I would say, on those soils get the drill as near the sheep as possible. I have found, if the sheep go out of the gate as the drill comes in, it generally means a better barley crop.

Now, in most cases it was found that enough residue of the sugar beet crop is left for the sheep to maintain the fertility of the lighter soils, although artificial manures are being used more year by year where the financial position permits. Anyhow, it will be seen that the farmers were, in this way, making part of the root shift a cash crop, and although a portion of the cash for his sugar beet had to be in the form of pulp, bought to be fed to cattle, the farmer had a good surplus after the quantity allowed to him by the factory had been paid for, I found that, as a rule, one ton of sugar beet pulp bought for every acre of beet grown, would keep the land in a good condition. It was taken as a rule, in the district in which I live, that a root crop should graze one and a half beasts to the acre. The beasts would be bought as stores from September to November weighing about 10 cwt. live weight, so you can see that one ton of pulp, plus the usual ration of cake and meal given with the roots would fatten that type of beast and the sugar beet tops left would allow sheep to graze as long on the land, and (with the ewe flock and store sheep) as well as they would have done on one-third of a swede crop ; so it can be seen that the sugar beet crop has played an important part in Norfolk farming, it being thus possible to make the straw into muck and sow to the stronger soils, and the sheep playing their part on the lighter soils. I feel I must take this a little further or I'm sure I shall leave some wondering what happens after the sugar beet tops are finished. I did not stop growing roots altogether. I found I could keep the breeding flocks on the tops until lambing time, say, February 14th, and then to swedes, which I had cut down to 1 acre per score ewes ; this suffices until the middle of April, and by that time I have grasses ready to graze.

I think this system, including the growing of sugar beet was the best for the land in my district, but I saw the system in danger so far as I was concerned through the geographical position of the beet factories, and I started experimenting with malt culms plus pulp.

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(The factories did not sell pulp except to growers). My experiments were made with half-bred Hereford-Welsh, and although not put up till January they did quite as well as those fed on pulp only. It will be noticed that both culms and pulp are products of our local lands.

Now, when the sugar beet subsidy fell in 1931, and with it the price of beet, it put sugar beet as a paying crop out of the question so far as I was concerned. I was so far from the nearest beet Factory (at King's Lynn) that I could not get my beets delivered under 8/- per ton by road, or by road and rail. Transport costs reduced the price of my beets at the nearest factory to 28/- per ton, which was quite useless to me ; so I had to think of something else.

For some years I had been growing a few vegetables of the cabbage variety, mainly for sheep, although occasionally it had been profitable to sell the vegetables for human consumption.

In 1918 I had started to grow sprouts and broccoli, but corn prices, and the labour shortage at that time cut this out. Recently I decided to produce on a larger scale and in greater variety. Now, the question was, how to maintain the livestock population on the farm. In my district it is desirable, if not imperative, to keep up the numbers of livestock. I made up my mind to grow cabbages for early feeding on the better land, for the sheep to start on when the grasses were finished, and after these the sprouts for the ewe flock until lambing ; then swedes or turnips. Carrots can be, and are, used for all classes of stock, from young growing cattle to the dairy herd, and for horses as well, allowing the corn ration to be cut down. So all split, diseased, or wormy carrots are used on the farm, and although I can, through certain friends who are still growers of sugar beet, get all the pulp I require, I used the unsaleable or unsuitable portions of the vegetable crops for stock feeding. I can hardly be called a market gardener ; I must, I think, be called a vegetable grower on a farming basis.

When turning to vegetable growing, I tried to keep all operations as near the ordinary working of the farm as I could ; all cultivations have been as near the usual for this district as possible, low enough perhaps to be criticised by market gardeners. I use mechanical power wherever I can ; for instance, the sprouts being planted on squares allow of cross cultivation. This is done by a tractor-cultivator both ways—with two chisel $2\frac{1}{2}$ inch points and one 11 inch " A " point in each space. This cultivation makes a good tilth for aeration and letting in the hoe for weed killing. I also have a " Morris " motor-car fitted with hoes and can with this cultivate the bottoms of the spaces in either 36, 24, or 18 inch spacing. Both these are useful implements, getting over about 15 acres per day, that is, $1\frac{3}{4}$ to 2 acres per hour, and although not getting quite so near the plants it does more than double the work, and much deeper, than horse hoes. They can be used until the plants get about 15 inches high, and at a low cost, one man using either tool, but they must be carefully driven. I ought to say the tractor wheels have to be

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spread for this purpose, but the work is quite well done, and little damage is done to the plants. In this way hand labour is reduced to a minimum both for horse working and hand hoeing. I have seen an ideal tractor attachment for this work, and I hope it will be produced shortly, as I consider this invention will revolutionize arable farming and market gardening.

The greater part of the Brussels sprout crop is *planted* but the rainfall being very low in my district planting is not very reliable. Although it is almost impossible to get "autumn earlies" any other way, I do not think it advisable to rely on a very big portion doing well after being planted. Last spring I re-planted over 10,000 sprouts per acre, more than double the number originally planted. I went over to make up the blanks four times, owing to drought and pests, chiefly slugs. I had a neighbour who planted 10 acres, next to my farm, that were attacked with slug and so affected by drought that he ploughed it up, and sowed swedes.

All the cabbage and savoys are *drilled* with the exception, perhaps, of a part field not cleared of another crop, or too foul with weeds at the time for sowing; and I am sure that although a fair crop of corn can be grown with weeds, it is no use trying to grow vegetables if the land is not fairly clean.

I feel I must look back to the reasons which caused a change to be necessary, and on doing so I find that, taking agricultural produce at pre-war prices and the cost of labour at about 120 per cent. above pre-war, it is obvious that something must be done if labour is to be employed in agriculture. Corn is below pre-war, especially barley which is the chief cereal in my district. That and meat have caused the change which we have seen taking place. Personally, I want to see these lands still growing those fine barleys they are capable of growing, and producing the same prime beef and mutton they have been doing, but I have no doubt that a very few more years under present conditions will see not only the majority of the farmers in my district "broke" but vegetable growing so much overdone that it will be a factor contributing to financial troubles, rather than financial gain.

I therefore ask all market gardeners to realise how important it is that corn growing and meat production should be upon a profitable basis.

I feel very strongly that if any government viewed the Land from the point of view of the production and maintenance of new wealth, it would be far better for the country generally. I cannot help saying how foolish I think the present system is—sending British capital abroad for foodstuffs for our workless people to eat, while we have the land here capable of growing far more than it is doing at present, at least in the district in which I live. And this at a time when we should curtail our imports, if we are incapable of increasing our exports! In my district the average loss to the farmer has been £9 per acre over a period of 10 years. My own accountant does the accounts relating to 60,000 acres, which showed

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losses amounting to £90,000 in 1931, averaging 30s. an acre, and he tells me that the average loss will be not less than £2 per acre this year, or £120,000. Say £210,000 lost on 60,000 acres in two years ; a simple calculation shows that my district must have lost well over a million of money by way of farming capital in that short time, to say nothing of the previous eight years. I have no wish to reduce the labourer's wage, but if arable farming in West Norfolk is to continue we must either have economic conditions all round, or artificial prices for our produce. The cost being now artificial we have to face an economic basis laid down by countries having a lower standard of living than ours.