

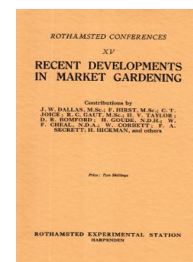
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Recent Developments in Market Gardening

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THE MARKET GARDENING INDUSTRY: THE POSITION IN BEDFORDSHIRE

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BEDFORDSHIRE has an area of slightly over 300,000 acres of which at present approximately 250,000 acres are devoted to arable crops and grass. Grass accounts now for 50 per cent. of the latter acreage as some of the heavier arable land has been sown or tumbled down to grass. In the market gardening areas, however, the grassland does not exceed 25 per cent.

Crops

It is difficult to estimate the acreage occupied by market gardeners, as many of the crops grown are not mentioned in the Agricultural Statistics of the Ministry of Agriculture. It may be reasonably safe to estimate, however, that the arable land now occupied by market gardeners is probably in the neighbourhood of 30,000 acres or nearly one quarter of the present arable acreage of the county. In giving reasons for this estimate, I propose to quote details as to the acreages of the various crops as returned in the Ministry's Statistics and supplement the figures by an estimate of crops not recorded. It is hoped by these means, to give you some idea of the crops grown in the county, the development of the industry in recent years, and the relative importance of certain crops to the total acreages grown in England and Wales.

One can regard potatoes in Bedfordshire as a market garden crop, as according to the *Report on the Organisation of Potato Marketing*, Economic Series No. 34 of the Ministry of Agriculture, it is estimated that approximately half of the potato acreage in Bedfordshire is devoted to first early varieties. Furthermore, in most years the bulk of the other varieties are also commonly sent to the markets "off the fork," *i.e.* the crop is not pitted or clamped. Figures for the past five years show that nearly 11,000 acres of potatoes are grown and although some farmers are growing late potatoes, this is probably offset by the larger market gardeners growing some acres of cereals—principally wheat and spring oats. These cereal crops have a two-fold-use—they enable the land to be rested by widening the rotation of crops and provide a cover crop for the broad red clover which is

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subsequently ploughed in as a green manure in the early winter. In recent years the growing of Brussels sprouts has been taken up by farmers, but sugar beet has been largely grown by market gardeners and some turnips are still grown for bunching. The land occupied by Brussels sprouts for the past five years has averaged fully 10,000 acres. These two principal crops bring us to the total of 21,000 acres. The acreage devoted to peas picked green, beans picked green, (mostly scarlet runner beans), cabbages, cauliflowers or broccoli, carrots and onions, in order of importance from an acreage point of view, in Bedfordshire and specified in Table IV of the Ministry's Agricultural Statistics, has averaged about 6,000 acres for the past five years. Though rhubarb and celery are mentioned in the returns, the amounts grown in Bedfordshire are negligible. There are more crops grown than those mentioned in the Statistical Returns. Parsley, beetroot, parsnips and marrows are relatively important and one also finds small quantities of radish, lettuce, spinach and other vegetables. It would seem that these crops probably occupy about 2,500 acres annually, thus giving a grand total of approximately 30,000 acres devoted to vegetable crops including potatoes. This figure, however, only indicates the amount of land occupied by market gardeners and not the acres, strictly speaking, of vegetable crops grown.

One cannot determine the actual acreages of some of the crops owing to the practice of half cropping or intercropping in some of the Bedfordshire districts where early potatoes in particular are grown. Perhaps illustrations of half cropping will enable you to understand better why it is that the acreages of certain of the crops in the annual returns of the Ministry are not accurate and do not give a true indication of the production of these crops.

A grower crops ten acres with early potatoes at a width of 36 to 40 inches between the rows and subsequently in May plants Brussels sprouts between these rows. He, therefore, has two crops growing on ten acres and in making his returns on the 4th June he states 5 acres of potatoes and 5 acres of Brussels sprouts. Had he been growing a full crop of early potatoes, he would have planted them in rows 24 to 26 inches apart so actually by planting wider he sacrifices one-third of his crop. It would appear that he will have the equivalent of $6\frac{2}{3}$ acres of potatoes on his 10 acres and when he has dug the crop in June, will be left with a full crop of Brussels sprouts, for the latter are generally grown in rows 36 inches apart. From a production point of view, he would be growing on the 4th June the equivalent of nearly 17 acres on 10 acres of land. The figures relating to acreages of runner beans, cauliflowers and sometimes other crops are influenced in this way.

Another example which may be of interest as illustrating the intercropping yet not affecting the acreage in the Ministry's returns in any way, is where parsley is drilled in a crop of peas or onions. In this case the full acreage of peas or onions would not be influenced and as no figures are asked for in respect of parsley acreages, the

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parsley can be regarded as one of the many catch crops for which no details are available. Generally speaking, the yield of the half crops concerned is not so good as had they each been full, and the custom of half cropping is tending to decline. Figures relating to the acreages of potatoes, beans, and cauliflowers in particular, for this county should be slightly increased when comparing with the details of counties where half cropping is not practised.

The Ministry's returns for the 4th June, moreover, do not give any idea of the acreage devoted to catch cropping. Growers clear their land quicker of the main crops than formerly, and catch cropping seems to be on the increase. A considerable acreage of spring cabbage is now drilled after early potatoes or early peas. Quantities of savoys, Christmas cabbage, broccoli and turnips are likewise catch-cropped and thus not recorded. Estimation of the acreage of catch crops grown is not easy, for consideration must be given to the amount of half-cropping practised, to the amount of potato and early pea land, and to the various acreages of early carrots and beetroot subsequently followed by these catch crops. The figure of 6,000 acres or one-fifth of the market garden land, is probably a reasonable one.

I would now like to give some indications of the development in the growing of market garden crops both in Bedfordshire and in England and Wales as shown by the acreages under certain market garden crops in the Annual Returns, and I propose quoting the figures for the years 1922 and 1932 in particular though the figures for other years have been examined, in drawing conclusions. These figures may be used for comparative purposes, though those of Brussels sprouts, cauliflowers and beans may be liable to slight error due to half-cropping.

Acreage under Certain Market Garden Crops in Bedfordshire and in England and Wales in June, 1922 and 1932, and Bedfordshire Averages as Percentages of Total.

	1922			1932		
	<i>Bedford</i>	<i>England & Wales</i>	<i>Bedford as %</i>	<i>Bedford</i>	<i>England & Wales</i>	<i>Bedford as %</i>
Carrots	829	14,084	5.9	440	12,490	3.5
Onions	970	3,557	27.5	360	1,890	19.0
Cabbage	527	27,954	1.9	1,000	33,860	2.95
Brussels Sprouts	5,606	14,951	37.5	10,400	33,040	31.5
Cauliflowers or Broccoli ..	208	10,475	2.0	420	17,670	2.4
Celery	37	5,282	—	20	7,710	—
Rhubarb	19	5,718	—	70	8,250	—
Beans	579	12,907	4.5	1,270	14,380	11.3
Peas	1,634	50,894	3.2	3,300	60,330	5.5

The figures for 1932 have been kindly supplied by the Ministry of Agriculture in advance and are subject to revision.

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The figures broadly indicate that the total amount of land devoted to the crops mentioned has increased by over 60 per cent. in Bedfordshire, but there has been an increase of only thirty per cent. in the country as a whole. Ten years ago Bedfordshire grew 7 per cent. of the acreage of these crops, and now the figure has increased to 9 per cent. The acreages, with the exception of carrots and onions, have extended.

The carrot acreage in Bedfordshire has diminished by about half and the onion acreage by nearly one-third in the last ten years. Only 40 per cent. of the carrot and 25 per cent. of the onion acreages of twenty years ago are now grown in the county of Bedfordshire. Twenty years ago fully 1,000 acres of carrots and 1,400 acres of onions were grown, these representing 9 per cent. and 30 per cent. of the total acreages of these crops for England and Wales. The acreage of carrots is now under 4 per cent. of that of the entire country, but one-fifth of the country's onions are still grown. I am informed that there used to be a tremendous trade in early bunched carrots consigned to the North in June and July in pre-war days, but this is now practically non-existent, and there is now a decreased demand for late carrots. Bedfordshire used to be famed for its pickling onions. Cucumbers grown out of doors are no longer to be seen, and other pickling vegetables are in no demand.

The acreages of the other reported crops have mostly been doubled in the past ten years and occupy an increased percentage of the land in England and Wales devoted to these crops. Thus we find that whereas only 2 per cent. of the cabbage acreage of England and Wales was to be found in Bedfordshire ten years ago, this has now risen to 3 per cent. The cauliflower acreage has increased from 2 per cent. to $2\frac{1}{2}$ per cent. The bean acreage, formerly only $4\frac{1}{2}$ per cent., is now fully 11 per cent. The pea acreage has risen from fully 3 per cent. to $5\frac{1}{2}$ per cent. These figures show that there has been a greater relative increase in acreage in these crops in Bedfordshire than in the remainder of the country. The increase in acreage of these crops has mainly been in east Bedfordshire. Brussels sprouts, however, do not share this relative increase for, although the acreage has been doubled in Bedfordshire, the county now only grows just over 30 per cent. of the acreage for the whole country instead of nearly 40 per cent. ten years ago. This means that Brussels sprouts are being grown to an increased extent by farmers in other counties. One finds that the farmers of Bedfordshire, in the areas adjoining the market garden districts, and further afield too, are growing sprouts, and it is on the heavier land that the acreage has increased. Farmers are becoming market gardeners to some extent at least—by growing sprouts on their better arable fields adjoining the roads. Brussels sprout growing has been found to be more profitable than corn. Incidentally the crop is being planted earlier and consequently gathered earlier than formerly.

When one considers the position with regard to crops which are not recorded by reason of their being catch crops, or because official

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particulars of them are not required, it is more difficult to give information with precision. I gather, however, that there has been a definite increase in the acreage devoted to spring cabbage. More acres are now drilled for clearance as spring greens than formerly. The acreage planted out, as opposed to drilled, has probably not increased to the same extent. The unrecorded acreage of cauliflower and broccoli (both heading and sprouting) has tended to increase. Christmas cabbage and savoys are probably not grown so much, as the consuming public is showing preference for Brussels sprouts in the early winter, and for the same reason the acreage of catch crop turnips is likewise decreasing.

Of the more important main crops of which no particulars are given in the Ministry's Statistics, it seems probable that the parsley and the parsnip acreages may have decreased slightly, whilst beetroot and marrows are now grown to approximately the same extent as ten years ago. In most market garden crops there are fluctuations similar to those connected with the better known potato crop and one year there may be a glut of, say, beetroot which is followed by a decreasing acreage till scarcity puts prices up and the acreage in the following year is increased.

Before passing to other matters, I must, however, say a word about the potato crop. The acreage has increased as compared with pre-war days; not quite 2 per cent. of the potato acreage of England and Wales was to be found then in Bedfordshire whereas now fully 2 per cent. is grown. It is estimated, however, that practically 11 per cent. of the first early potato acreage is centred in this county. Ninetyfold is a favourite early, and King Edward remains the main crop variety. Majestics are also considerably grown.

The Soils

Records show that market gardening was an established industry in the eastern part of the county around Sandy, adjoining the Great North Road at least 150 years ago. It is of local interest that of the 111 residents of Sandy at that time no less than 46 were market gardeners, and many of their descendents are still carrying on the specialised work in that area. In East Bedfordshire there is, therefore, the accumulated experience of generations of growers and the workmen are skilled and practised in the handling of vegetable crops. Market gardening started in that area because the land there was found to be particularly suited to the growing of early crops. You will note that I have said early crops, as this is important, in that it indicates the type of land that has been mostly cultivated by market gardeners—land open in texture, free draining, and workable at all times of the year.

There are four main soil types in the county: (1) Clay; (2) Gravel and Alluvial; (3) Lower Greensand; and (4) Chalk. The clays occupy nearly two-thirds of the county and the remainder is divided almost equally between the other three types. The industry

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has been confined principally to the River Gravels and the Lower Greensands and occupies practically all the former. Both these soils are not naturally fertile, the former being a silty gravel which is inclined to set hard and very often overlying a brown sand; the latter is a poor light sand and occupies the higher ground. Each of these soils is inclined to dry out in time of drought. Presumably, for many years the gardening was confined to the Lower Greensand to the east of Sandy, where the land was sheltered from the north and east, for one hundred years ago we read that at Beeston, which adjoins Sandy on the south-west side and where the soil is of a gravelly nature, ordinary farming was practised, one farmer in particular being then famed for his cattle. At the present time practically no live-stock is there.

In pre-railway days the growers returned from London with soot and stable manure after they had disposed of their produce. London manure and soot have stood the test of time and still form respectively the basic and stimulative manures of the market gardeners. The construction of the Great Northern Railway was undoubtedly a great boon to East Bedfordshire, for the London stable manure could then be obtained at a nominal sum for the best grade, and sometimes the inferior manure could be obtained free for carting from the station. This led to an easier maintenance of the land which had been intensively cropped for many years before, and enabled the fertility of the more recently broken up land to be raised. Now we find that both the good London manure and soot are less easy to obtain. Twenty years ago the former cost 4s. to 5s. a ton at the station, but nowadays it costs 8s. to 12s. The fertility of the gravels and greensands is tending to drop as there is less of this good quality horse dung available—particularly do I refer to land occupied by the smaller growers, who are not able to buy the London manure so advantageously as the larger growers who purchase on contract. The quantity of London manure now used in the Sandy area is probably only one-eighth of what it was in pre-war days. Shoddy, being relatively cheap, is being used as a substitute. Artificial manures are more freely used—particularly nitrogenous ones for green stuff, though the use of soot has not diminished to the same extent as has the dung. The ploughing in of crop residues as well as mustard and clover, has undoubtedly aided in the building up and maintaining the fertility of these hungry soils.

The practical value of bulky organic, and possibly green manuring, to successful crop husbandry in the free draining soils, will be further appreciated when it is realised that the district is one of very low rainfall. It is one of the driest areas in England and yet the diligence of its cultivators had made it one of the most intensively cultivated and productive parts of the kingdom. The average rainfall for the past twenty-five years has only been 23.7 inches per annum. For the last ten years the average has been 24.5 inches and for the previous ten years 23.5 inches. There are, of course, years when the rainfall reaches 30 inches. The year 1930 was one, but in 1929 only

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20.16 inches were recorded, of which 12.72 inches fell in the last three months. As summer rainfall is much desired by the market gardener, this was a disastrous year. In the extremely dry year of 1921 the rainfall was only 10.12 inches—there was not any rain worth mentioning from April to October. Fortunately the rainfall is generally fairly well spread out over the year. It must be apparent that the use of bulky organic matter as a means of improving the water-holding capacity of the soils and so lessening the risks attendant upon drought, is of great importance in the maintaining of a good level production. Artificial manures are more successful in a wet season. If the season is a dry one, and the soil not retentive of moisture, one may broadly say that no matter how much concentrated artificial manure one may use, a poor crop is apt to result. A further examination of the rainfall records for the past twenty-five years shows that in ten of the years the amount of rain has been below the average of 23.7 inches for the period. Growers realise the necessity of endeavouring to maintain the humus content of their soils, costly though these endeavours are, as it is in these dry years that crops are light and prices tend to be high.

There is no regular form of rotation for crops. A market gardener endeavours to keep his land in such good heart that rotations are not so essential as in ordinary farming practice where natural fertility is more relied upon. The rotation, if any, is generally a short one. It will be realised that with larger acreages of potatoes and Brussels sprouts in particular, and smaller acreages of other vegetables, it is exceedingly difficult to avoid the large acreage crops following one another closely. There are exceptional fields which, on account of their earliness, have been devoted to early potatoes for many years in succession—the potato crop either being half cropped with something else, or if a full crop then followed by a catch crop. One is finding, however, that potato sickness is compelling growers in at least one area to reconsider their cropping system. Because these light soils tend to be lime-deficient and some are now markedly so (growers having neglected liming owing to the fear of producing scab on the all-important potato crop) one hears that although Brussels sprouts have only been grown a comparatively short time, the land is already becoming Brussels-sick. There are indications, too, that the light soils are rather low in available potash, though early potatoes and cruciferous crops apparently do not require much of this.

I stated earlier in this paper that the farmers on the heavier soils—the better boulder clays in particular—are now growing Brussels sprouts as well as late potatoes. This is partly because the quality of the sprouts from these fresh areas tends to be better than from the districts where the crop has been grown in rather close succession. These boulder clays suffer less in a dry summer, and in that way carry a crop better, and in the case of King Edward potatoes, produce a more uniform sample than do the lighter soils where drought causes second growth. The farm tractor is enabling a suitable tilth for the

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growing of potatoes and Brussels sprouts to be more easily attained on these heavier soils, and motor transport is enabling the produce to reach the station or market more readily than ten years ago.

Possibly some examples of crop sequences may be of interest in showing the methods of growers. Potatoes may be followed by spring cabbage, followed by Brussels sprouts, followed by early peas, followed by parsley, and again potatoes. Or another similar one might be potatoes followed by wheat or odd crops such as beetroot, parsnips and marrows, followed by Brussels sprouts and then peas.

A narrower sequence might be Brussels sprouts, potatoes, spring cabbage (catch crop) and then back to Brussels sprouts; or early potatoes followed by spring cabbage, followed by runner beans, thus giving three crops in two seasons. These latter two sequences would not necessarily be maintained for long, as some other crop or crops would be interposed.

A widening of the rotation in many cases is highly desirable, as otherwise trouble by way of pests and diseases is not easy to avoid. Science has not yet been called upon to any great extent to find direct remedial measures, so much work in this connection remains to be done.

Size of Holdings and Labour

It is impossible for me to state the most usual size for a market garden holding because of the smaller and larger growers being so intermixed, particularly in those areas where the industry has flourished longest. Market gardening started in a small way, and it was difficult to acquire suitable land as farming was relatively prosperous, and the large landowners were prejudiced against the growing of vegetables, as such crops, being sold off, were considered to exhaust the soil. Suitable fields are said to have made as much as £350 per acre in the middle of last century, and more recently £200 per acre or more has been paid for similar land. Thus there were numbers of growers cultivating scattered small areas in different parishes, some of the land being early and some late. Twenty or more years ago, the County Council acquired farms and divided them into small lots of one or two acres or more and the policy was continued after the war. Other landowners did likewise, for there was a great demand for land. Now there are large open fields resembling those of pre-enclosure days. Rents are high as the plots are small, and here again the smallholder suffers, for there are no buildings excepting very limited accommodation in the villages. Fifty to seventy shillings per acre is quite a usual rent, and specially good land may make £5 per acre. In pre-war days, when corn-growing became less remunerative, farmers on the lighter soils commenced to grow vegetables and land also began to change hands in larger areas. Some of the larger market gardeners took over ordinary farms both on the gravelly and slightly heavier soils. Such land could then be bought at quite nominal figures. Some larger farms were subdivided into compact holdings, complete with house and buildings.

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The smaller grower may still have land in different parishes, and now the larger market gardener may grow extensively in one parish or have several farms—indeed, some may have a stand in a London market for the selling of their produce or of that of others on commission.

There are, however, a great number of smallholders. Practically 30 per cent. of all holdings in Bedfordshire do not exceed 5 acres in extent, and most of these will be in the market gardening areas. The corresponding figure for England and Wales is 18 per cent.

The fall in prices of produce generally is being felt by all market gardeners, the smaller man in particular is finding it extremely difficult to get a living. His land is dear, he cannot purchase manure so well as the larger grower, and the fertility of his scattered fields is decreasing. He has no means of keeping livestock for he has neither buildings nor fenced fields, nor in many cases grass. In some areas, at any rate, the larger grower is taking over some of this land and the small man is entering his employment or that of another for seasonal work at piece work rates. The piece work system is very common. A usual rate of pay for gathering Brussels sprouts is 2s. per cwt. (sixpence per bag), and in a reasonable crop 5 cwt. can be gathered per day. Potato digging costs say 15s. to 16s. per ton in a four to five ton crop, or 10s. to 12s. in, say, a twelve-ton crop. Women pick peas for 1s. to 1s. 3d. per 40 lb. bag, and runner beans from 6d. to 8d. for a similar amount. There is scarcity of labour at peak periods, so good wages are earned. The wages for regular workers are generally higher than in the purely agricultural area. The piece work system is not a good one however, where careful grading of produce is necessary, unless the supervision is close.

Some idea of the wage bill of the market gardener may be formed when one considers that three men in addition to the grower will be employed on a fairly intensively cultivated holding, of say 20 to 25 acres in extent. On larger holdings, where some corn may be grown, one man will be employed for every eight to ten acres. Female labour will be needed in addition for pea-picking, and possibly extra hands for potato digging.

I am indebted to the Ministry of Agriculture for supplying figures relating to the number of workers—excluding the occupier, his wife and domestic servants—employed on holdings in 28 parishes in the eastern (market gardening) part of the county. A few of the parishes are not market gardening ones, and there are, moreover, many smallholders, yet one person is employed for every 18 acres of land. The equivalent figure for 25 parishes of similar area on the heavy land area in the north of the county, where wheat is the main crop, is one man for every 54 acres. In the latter case only 45 per cent. of the land is arable as opposed to 75 per cent. in the former.

I venture to suggest that we may see a return to the more self-supporting type of holding with buildings for livestock to make manure of the straw which a larger market gardener might be

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tempted to grow now that wheat prices are being stabilised. Some measure of help to the livestock industry would encourage this, and sheep folded over crop remains, would also help to augment the decreasing supplies of London manure. Hitherto the majority of market gardeners have not had any reason to require livestock. A more centralised holding would enable greater use being made of the tractor and doubtless other mechanical means may be employed to limit the now costly labour bill.

Transport and Marketing

The opening of the Great Northern Railway from London to the North in 1863, followed by a branch line of the London and North Western Railway from Bletchley to Cambridge, placed growers in East Bedfordshire in an advantageous position for sending their produce into the London markets, the Northern and Scottish industrial areas, as well as Birmingham, and other consuming centres in the Midlands. Express goods trains have been running daily for more than thirty years from Sandy Station. One such train leaving Sandy at about 5 p.m. enables produce to be in the Glasgow markets by 6.30 a.m. the next morning. Excellent facilities enable the markets of Lancashire, West Yorkshire, the North Midlands, and West Midlands to be similarly served. Truly the railways have taken a big part in the building up of the industry, and it is said that possibly more market garden produce has been loaded by growers at Sandy than at any other station in the kingdom.

We are all aware, however, then transit rates vary. The larger the consignment the more favourable the terms, so that the large grower is able to place his produce in the markets more cheaply than the smaller man, or alternatively he can send it further. Many of the large growers, therefore, send produce to the North and cater for that trade, whereas the London or Midland centres are supplied by the smaller acreage gardener. It will be realised that the larger grower can favourably supply any district. The telephone keeps him in touch with all markets. Railway rates for transport, however, remain rather too high, and road transport contractors with motor lorries find a demand for their services, particularly from the small consigner, as a load can be made up for the London markets by collecting from several holdings. The transporting of produce by road has increased enormously of recent years—truly history is repeating itself, for the gardeners of seventy years ago had to go the same way to London, only more leisurely. The market garden area has widened away from the railways, and produce can be taken straight from the fields to the markets at lower cost and with less trouble to the grower. Peas picked in the early morning can be on sale in the London shops, forty miles away, within three hours of their leaving the field or it is possible for them to be in cans at the canning factory in approximately the same time.

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I understand that commission salesmen do not like the extension of the transporting of produce by motor lorries for two reasons. First, there is an increasing number of growers who, with their own transport deliver produce direct to the shops, and of dealers who buy the produce in small quantities from growers for disposal in a similar way. The smaller grower who may have difficulty in marketing his produce has of recent years found the dealer to be a useful man. Secondly, the delivery of produce to the market stands is not so easily controlled; the salesman cannot tell exactly when the produce will arrive, and, when it does arrive, he may be already well supplied. The contractor undercuts the railway by taking return loads, so naturally on arrival at the market, he wishes to get cleared, and this sometimes leads to an overstocked appearance of the stands with a consequent tendency towards the lowering of prices. The railway companies, however, inform the salesman how much produce there is for delivery and will temporarily hold the produce and so regulate the supplies to the stands. Delivery of produce from the station direct to big purchasers can be arranged without the produce needing to be exposed. Certain commission salesmen have their own transport lorries but these naturally are under their own control.

It is desirable that there should be few sellers and many buyers for the maintenance of relatively high wholesale prices. In other words the selling should be in the hands of a few who would not tend to undersell one another. The increase in the number of sellers (dealers) to the shops in the consuming centres is already tending to aggravate the downward movement in price, as naturally a perishable commodity must be disposed of quickly. On the other hand, the producer wants an increased number of buyers and these dealers are buyers from him, therefore, the more dealers there are the greater will be the growers' chances of being able to hold out for a fair price, provided, of course, that the number of dealers in proportion to retail shops is not too great. The presence of dealers has acted as a stimulus to the commission salesman—possibly dealers have helped the industry by making contact with the smaller shopkeepers, who may not for various reasons be able to buy from the wholesale markets. Transport contractors are increasing the size of their lorries and one sometimes notices bad loading of mixed consignments with perishable and light produce suffering, and some growers are already returning to railway transit on this account.

The increased production of horticultural crops and the consequent fall in prices is causing greater care and attention to be devoted to the type of produce offered on the markets. It is very usual for growers to tie the bags with a particular colour of string for identification purposes and one sees Brussels sprouts being increasingly consigned in nets rather than in small sacks. Nevertheless, there are some who consider that some measure of control of the marketing might be desirable for the Industry and we are aware that the potato crop is already being considered from that point of view. There is one canning factory taking a considerable quantity of peas

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from the county, and a number of growers are attracted by the certainty of a fair remuneration for their supplies and would be prepared to grow other crops similarly. The development of this latter industry should help to stabilise conditions.

Summary

The annual Statistical Returns of the Ministry of Agriculture do not give a true statement as to the acreages of some of the crops grown nor is any reference made to others. Catch cropping is practised and such crops are not recorded. The acreage of many crops has been increased and the extension generally has been greater relatively in Bedfordshire than in the county as a whole.

The Industry has been mainly confined to the lighter soil area in East Bedfordshire but extensions—mainly by means of Brussels sprouts and potatoes—are taking place on the better class Boulder clay soils. The lighter soils have been made productive by the use of London horse manure, the supply of which is decreasing. Bulky organic manures seem desirable as the area is one of low rainfall. Many cropping sequences are too narrow now for safety.

Smallholders are numerous and their fields are very scattered. There being no conveniences for the keeping of livestock, fertility is tending to decline on the smaller holdings. Labour is not very plentiful and piece-work is usual. Wages are higher than in agricultural districts. Market gardening affords much employment. Holdings may have to become more self supporting in manure and more centralised for limiting labour costs.

The railways have taken a big part in developing east Bedfordshire—excellent transport facilities are provided to markets in all parts. Road transport by motor lorries has developed greatly but the system has weaknesses. Dealers have increased rapidly in numbers and some measure of controlled marketing may be desirable. Canning may help to stabilise the industry.