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150 820 sq mil
390 622 sq km

Farms and Farming in Rhodesia.

THE MAZOE DISTRICT.

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The Mazoe District comprises the entire basins, from their source, of a series of more or less parallel rivers flowing in a north-easterly direction, and ultimately joining together in the Mazoe, which passes out of Rhodesia near the north eastern confines of the territory into Portuguese East Africa, where it finally joins the Zambesi. An irregularly shaped area of roughly 3,000 square miles in extent, it is bordered on the west by the Umvukwe Hills and Lomagundi, on the north by the Darwin District, and on the south and east by the river boundaries between it and Goromonzi district. On the south it shares with the latter district the possession of that fertile tract of level plateau—the Gwibi Flats; mealie land *par excellence*, from which arise within a few miles of each other, rivers flowing in very different directions and through very varied country—the Mazoe and its tributaries, such as the Tatagura, Umrodzi, Poorti and Umwidzi; the Gwibi flowing westwards; and on the south the Makabusi and other feeders of the Hunyani River.

3000 = 0.2%

From this central tableland numerous valleys wind between steep rugged and wooded hills, gradually widening and joining together, forming small plains or basins. These valleys very clearly cut the district up into distinct areas, and vary very materially in fertility, some, such as the Tatagura, Mazoe proper, and Moore's Concessions, have been in occupation for several years and comprise some of the most advanced and settled portions of Rhodesia, ranking in this respect along with the neighbourhood of Salisbury and other large centres. To the east side and the north the country is agriculturally poorer, but being well watered and favourably situated, it is being rapidly taken up for pastoral purposes. As the general level of the country sinks towards the north, so the height of the hills from their bases rises, and Mazoe possesses in the Umvukwe, N'deri, Shashi, and the Iron

776,970 HA

say

777 000

1 920 000 Acres

Palmer R 1977

Table VI p 122

gives

1,710,080 Acres

=
6 920 59 HA

=
2 672 sq miles

Mask, a heritage of mountainous scenery which adds much to its attractiveness and to the pleasure of residents and visitors.

The soils are derived from dolerite, schists and granite, and are fertile in descending order accordingly:—

Great differences are found in the character of the soil and in consequence Mazoe offers a wide field for investigation, and requires much study before the most can be made of the varied possibilities of the district. Much attention has been and still is devoted to mining development, but this is beyond the scope of this article save in so far as it affects the farming conditions. Suffice it to say that while the prospector and pegger of speculative claims, makes his presence felt in a manner not favourable to the farmer, he is regarded as a necessary forerunner of genuine mining enterprise, which will in time give a reliable and permanent local market. That the established mines have not always yielded the market anticipated is perhaps regrettable, but nevertheless, mines mean mouths to be fed, both European and Native, and someone must provide the food and someone else must pay for it.

Lime occurs in deposits at many different places in the district, occasionally as compact but not very hard rock, as, for instance, on the famous Insigesi and Pimento Park, where it is very rich in remarkably beautiful fossil remains; but more often it is found a few feet below the surface in vleis soils, or as an outcrop around a spring, and here it is usually of a spongy texture, light and loose, and often somewhat resembling pumice stone. A number of samples have been submitted for chemical analysis, and it is hoped that the results of this examination may soon be made known, and throw some light on the value of these beds for manurial purposes as well perhaps as for the cyanide process on the mines, for which they are already to some extent employed.

The veld of Mazoe is as varied as its soils. Grass is everywhere abundant, varying in character; on the Gwibi Flats, on the hills, and becoming more and more rank as one goes into the valleys. In some of these vleis reed swamps occur, which when drained and cleared furnish some of the richest of soil. Mr. Backhouse and Mr. Scott on such soil

have reaped crops of 28 and 30-bags of maize per acre and this seems the crop best suited to tame such land in which for years the reeds continue to appear and grow amongst the maize, which itself is quite abnormally tall and coarse.

The granite veld presents no peculiarities different from the same class of soil elsewhere, there is abundance of moisture, and its chief value lies in the early grazing it provides.

On the red soil the veld is rich, and in the present incompletely stocked state of the country, much more than ample during the growing season for current requirements; but from August until the rains come there is apt to be shortage of food supply and, although the extensive mealie lands at present meet this need in a great measure, the fact remains that the time is not far off when farmers must grow crops for their stock and not as now for immediate sale only; especially is this necessary where the cows are milked, or the cattle are improved above the level of the native. The drawback of the red soil is no doubt the fact that the veld does not sprout early upon it as on the granite, but in Mazoe where possibilities for irrigation on at least a small scale, and often on a comparatively large one are so numerous, there should be no difficulty in having at least some succulent food during the dry time of the year, and no excuse exists for not having abundant stores of hay in such a wonderful grass country.

Few districts are so favoured with numerous small perennial streams as is Mazoe. Less abundant perhaps than in Melsetter and Inyanga, there is yet more land on to which the water can be brought with ease, and which possesses sufficient depth and favourable inclination for irrigation. As yet but little has been done however. A scheme planned and partly exploited on the Umrodzi and Garamapudzi rivers has not yet been carried to a successful issue, and along the lower parts of the Mazoe River nothing has yet been done to raise the river out of the somewhat deep channel in which it flows. So far indeed, what irrigation has been attempted, and the whole amounts only to perhaps one hundred acres, has been done at the head waters of the rivers.

Thus Mr. Clayton on his farm Hereford has utilised a vlei and drained from it water for some 30 acres of land, and is now about to increase this area to 70 acres, on which he can grow an abundance of winter forage and probably lucerne. His neighbour, Mr. Mathews, of Welston, has made a dam further down in the same valley, which commands several acres and similarly, Mr. G. Lamb, on Eastbank, has used the springs in his kloofs to irrigate a few acres of land valuable for market garden crops and fruit trees, which he is growing most successfully. In the same vicinity Mr. Backhouse has to turn his energies to the problem of draining water from what was originally a swamp, and has now one of the most productive farms in Rhodesia. A little further down the Mazoe River, we find the first weir and furrow, constructed a number of years ago by Dr. Sketchley on the farm Lowdale, and commanding a good acreage of fertile ground. The three acres of irrigated onion beds on the adjoining farm Ingleborough have acquired a local fame from the profits derived from them by Messrs. Reed and Tait. These pioneer efforts, creditable as they are, form, however, but a foretaste of what may be done. At the present time Mr. Watt, the Irrigation Engineer attached to the Department of Agriculture is engaged in a reconnaissance of the Mazoe and its tributaries, with a view to ascertaining the most feasible projects. A preliminary examination gave sufficient justification for the opinion that it would be possible at reasonable cost in several places to construct irrigation works, which would bring considerable areas under the furrow and would permit of the cultivation to advantage of such crops as wheat, barley, and oats in the winter, and materially facilitate the growth of citrus fruits. By enabling the early planting of tobacco, and by minimising the amount of replanting necessary, the acreage under that crop may be very much increased at the cost of a minimum of water. Indeed, a few acres even, of irrigable land to a farmer who is to-day restricted to summer crops, would be of enormous advantage, enabling him profitably to employ his labour throughout the season, turn over his capital more rapidly, and entirely alter his methods so as to produce more and spread his capital and labour over a more varied field, thereby reducing his risks and increasing his sources of profit. For such purposes the streams of the Mazoe district hold out good promise.

Mazoe district has played its part in the history of Rhodesia. Moore's Concession was virtually *imperium in imperio* at one time, and the farmers now occupying it claim the freest and best title of any of the numerous forms of land tenure extant. During the Rebellion much fighting occurred within its borders, while the heroic episode of the Mazoe Patrol is one which generations to come will remember with pride. Although parts were early occupied, it is only of late that many of the farms in the outer portions of the district have been taken up, and though now occupied, allowance must be made for the very young state of many of the holdings. The next few years will therefore show great changes, and very considerable development is assured beyond what the present statistics indicate. A factor in the general wellbeing is the active existence of two Farmers' Associations, the one meeting at Mazoe and the other at Kimberley Reefs, while several farmers on the south side belong to the Salisbury body.

The Co-operative movement was early taken up by the Mazoe farmers and has made great headway, comparatively few crops of maize not having been placed in the hands of the Society. The mines right out to Mt. Darwin are being supplied, and everything done to economise haulage. Had every farmer been seeking his own market, no doubt there would have been much unnecessary riding of mealies to and fro, which is obviated where the stocks are pooled. The crop being a heavy one, there is unavoidable difficulty in handling it, especially as farmers are anxious not to ride transport but to use their cattle in ploughing up more land, all in hope that by next harvest they may be able to send the crop away by rail. Co-operation has undoubtedly proved a boon to many, and its extension to other staple crops is to be expected as these become of sufficient importance to justify this method of disposal.

In a district where relatively so much attention is paid to arable farming and crops requiring thorough cultivation, such as tobacco, onions, potatoes and maize, more labour is required on each farm than in other less intensely farmed parts, or where stock-raising is the main industry. The outlook in this respect is causing grave anxiety, especially amongst the newer settlers, of whom again there is such a

large proportion in this district. Old hands as a rule get local labour, such as it is, for the boys know them and come long distances to work for them; but the newcomers are dependent on bureau boys or alien "volunteers," and these are scarce. The matter is one requiring earnest and immediate consideration, for so much of the pioneer work of the first few years on a farm is necessarily hand and unskilled labour which no machinery or white labour can replace, and which is necessary in order to prepare the way for the up-to-date and mechanical processes of high farming.

Transport is an important factor in the district. Traffic between the railway, Salisbury and the large mining centres at the Jumbo, Kimberley Reefs, Shamva and Mount Darwin, employs an enormous number of mules and donkeys and, within prescribed limits, of oxen. Trains of wagons are constantly to be met with on the through roads, while wood riding and the conveyance of grain from the farms towards centres of consumption gives even bye roads a busy air. A railway would release a great deal of ox power for farm work, while the increased activity which follows in its train, would probably give ample occupation to the equine hauling power now doing work more fitted to a locomotive. And as with farming and mining operations so with the use of the roads there seems to be a rapid increase and constant progress. The motor car has long since established itself for fast work, and Mr. Garvin keeps one on his farm for his personal use.

Malaria has undoubtedly been prevalent, and is to be regarded as endemic. This implies that it is a prime essential that the simple recognised precautions should be rigorously followed, and if this had been the case heretofore, there is little doubt that less sickness and fewer deaths from Black-water would have been recorded against the district. Mazoe hardly compares well with certain other districts as regards the character of the dwellings erected, on the Concession side at least. This is largely a matter of imitation or fashion, and now an awakening is manifest, and brickfields and kilns are the order of the day, while scattered about there are already excellent dwelling houses, such as those of Mr. S. Biggs, Bellevue; Mr. Marriott (in course of construction); Mr. E. Scott, Wormwood; Mr. Newitt, Avonduur; Mr. Garvin,

Steamish; Mr. Crofton Townsend, Lowdale; Mr. Backhouse, Calgary; Mr. Gibson, Weltevrieden; Mr. Black, Selby, and others. But huts and ramshackle makeshifts are too prevalent, and the mosquito is often given free play. Breaking up of new land seems to favour the trouble, and as most new settlers live somewhat spartanly, it is hardly to be wondered at that bad cases of fever do occur. These difficulties are as a rule realised, and it is likely that less and less will be heard of the malady, as is the case elsewhere, when the country takes on a more settled and established form and when people are able to take greater care of themselves.

As regards diseases of stock, the district has a fairly good record, and cattle particularly are thriving very well indeed. Horse sickness is as prevalent as elsewhere, and in the lower parts may occur all the year round. Strangles has of late been common owing probably to the considerable importation of donkeys for transport purposes, but on the whole the reputation of the district as a healthy one for stock is of the best.

Considering the large number of farmers in the district the total number of cattle (approximately 6,600 head) is somewhat disappointing, though for this there are several good reasons. About 2,900 draught oxen are in the hands of the farmers, but a great deal of transport is done by professional transport riders, who also use mules and donkeys. These are not counted in this enumeration, unless also used for farm work. Many of the newly settled farmers were about to procure stock when prohibition of movement had to be put in force in the Salisbury district, and they were cut off from their sources of supply. This also probably accounts for the paucity of breeding cattle. Many farmers have from 20 to 60 head, while a very few are devoid of any, and rely on goats or the "condensed tin" for their milk supply. This state of affairs is the more regrettable, for the owner of a few head cannot afford to keep an expensive bull, and has usually to be satisfied with something more or less mongrel, and hence, however much bigger than the native cow, yet often unreliable and faulty. Increase is rapid and no doubt a few years will see a great improvement in this respect, but meantime the position is not satisfactory. Health and condition and rate of increase are good, but such yield should

carry more stock, and with so much cultivated land artificial food should be abundant even where early veld is scarce. No doubt the deficiency is but transient and is realised by those most concerned, for cattle are readily bought up when opportunity offers and bulls with some superiority about them are sought after. Should dairying progress as seems not unlikely where the farms are of limited extent, there will no doubt be a demand for milking strains, while the newer settlers in the north and north-east of the district are likely to seek beef and a ranching type of beast.

An earnest effort to breed good stock and one promising well of itself and for the country is to be found on Mr. Clayton's farm, Hereford, where two small herds are kept, one of Afrikander Shorthorns, and the other of graded Frieslands. The young stock were imported from Cape Colony as two-tooth heifers and have now for the most part grown into large roomy animals. About a year ago Mr. Clayton purchased one of the young Sussex bulls—Ethelbert Sampson—imported by Mr. L. E. W. Bevan, and the Short-horn Afrikander heifers are now calving down to this bull. The calves, though still young, are exceptionally fine specimens, growthy, well ribbed up, and possessing plenty of bone. In order to still improve the standard Mr. Clayton, who has recently left on a visit to the Old Country, intends to bring with him on his return several pure bred Sussex heifers and probably one or two young Lincoln Red bulls.

Dairying is not extensively practised in the district as yet, though on the farms Summerdale, Somerly, Rockwood and M'sasa, and on the Great B, it forms a regular part of the routine both as a fresh milk and a butter trade. With such ample opportunity for growing succulent crops in winter and such excellent summer pasturage the outlook would be bright but for the present difficulty of obtaining reliable milkers.

In a district where horse sickness is so prevalent equines are necessarily scarce, and in the hands of farmers there are only about 30 horses all told, three times as many mules, and upwards of 200 donkeys; the latter kept in some measure for breeding as well as work. Flocks of small stock of one or two hundred do well, though large numbers scarcely find adequate pasturage if kept in one flock. There may be about

2,000 sheep in the district and 550 goats, the latter in some cases being kept for their milk. Superior goats give up to four bottles a day, and are therefore a valuable asset for domestic purposes where other milk is often scarce.

Not a few men go in for pigs, which are found to do very well and are valuable gleaners after the maize crop is harvested. There must be close on 1,000 pigs kept in Mazoe, but this is a figure which naturally is constantly and rapidly changing. Messrs. Jarvis and Short, at Summerdale, make a practice of curing bacon, killing as many as ten pigs at a time, and turning out a very creditable and sound article. Mr. S. Biggs, Bellevue, and Mr. Appleby at Rockwood, have also made a feature of pig rearing, while Mr. Backhouse on Calgary, farms systematically with them, running a herd of from 150 to 200, feeding them off in batches and selling them at from 120 to 200 lbs. live weight while still quite young. He has lately imported from the south a pen of well bred Berkshires. Some excellent specimens of the breed will also be found on Mr. Clayton's farm. Properly cared for, kept clean and well looked after, there is money in pigs, especially where, as in Mazoe with so much natural food for them and so much mealie lands there is unavoidable loss of grain, which is best gleaned by the pigs. Some years ago a bacon factory was mooted, but the scheme fell through. It should not be difficult with pigs becoming so plentiful in the country to carry on an unpretentious business in the making of bacon, lard and sausages, and at the present relatively low price of maize and the high price of bacon the transformation of the one into the other has an attractive appearance.

It is not too much to say that the Mazoe district gives every indication of being, along with portions of the Goromonzi district adjacent to the Gwibi and around Salisbury, the granary of Rhodesia, the area, that is, in which the largest percentage of land will be, and even is already under the plough. This will of course be only a fraction of the total area, and stock will ever form a very important portion of the Mazoe farmers' wealth; but none the less the proportion of the land cultivated is, and will continue to be, high. No district offers as much scope for maize growing, while

numerous other crops are coming to the fore and bid fair to render feasible the idea of continuous working of the land without leaving it to "rest." This, together with the possibility of putting a considerable area under irrigation and the success which is attending the cultivation of citrus fruits, means that Mazoe must be regarded as a district in which the application of high farming methods are called for, where the arable farmer will predominate, and the price of grain be the prime interest of the community.

Maize grows to perfection and offers, if not the highest, certainly the quickest return on money invested in it. In many cases it is the only crop; in every case it is the principal crop. That it will always remain so is by no means sure, but it is likely long to continue the staple product of the district. It is the readiest crop to grow, it is the best understood, the safest, and at the moment the easiest to sell, although the price is not what it once was and leaves little enough over as a reward for the time spent on it and the capital invested. The crop of the district now reaped is calculated to be as near as may be 112,000 bags, equivalent to perhaps 11,200 tons of grain. Of this, one or two hundred bags suffice for the needs of each of the 130 occupied farms which may be taken as being concerned. The balance is finding its market on the mines round about and in Salisbury, and a great part of the crop is being handled by the Farmers' Co-operative Association. The yield per acre varies from two bags—which may be set down as a failure—to ten and even more, while nine bags is quite a common figure. The average for all is about 8.2 bags per acre, a very high average which speaks volumes for the general fertility of the district.

Salisbury White and Boone County, more or less pure, appear the favourite sorts, the former being in the greater favour, while 8-row Hickory King is preferred on the lighter cropping lands. Unfortunately the seed obtained last year was generally disappointing, else the figures for the total crop might have been markedly higher. There is a great need of attention to the kind and quality of the seed to be used, a fact fully realised by those concerned but unfortunately difficult to accomplish. For this reason the reputation of Mazoe maize must temporarily suffer until good seed can come into general use throughout the district.

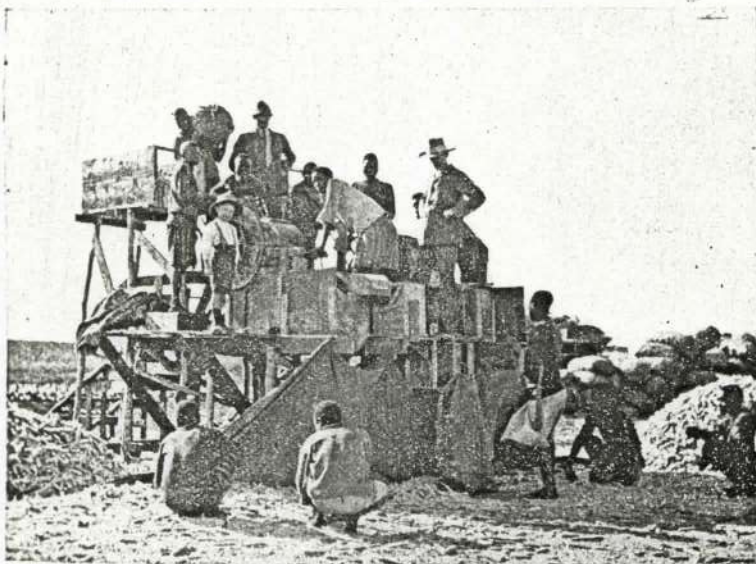
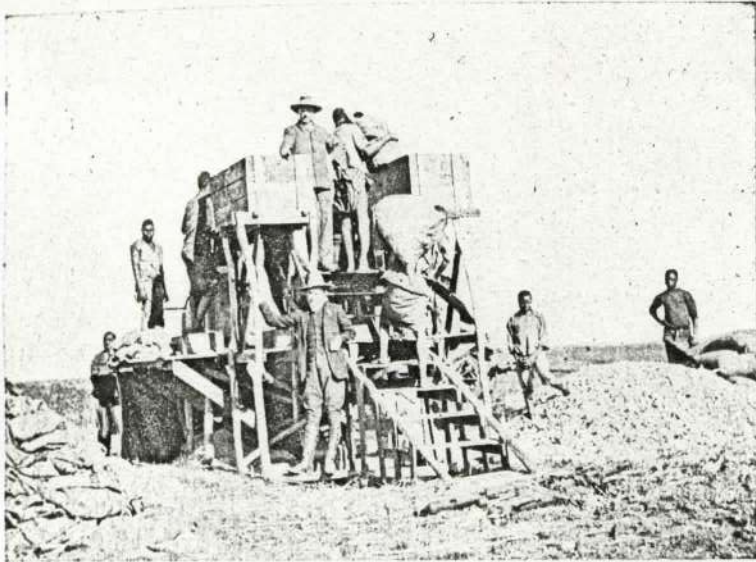
The broad acres of the Gwibi Flats probably offer the easiest and cheapest area for maize growing, and hence production per bag should work out favourably there. Yet the rich lands of Moore's Concession give heavier returns per acre, and both the heaviest average yields and biggest individual crop stand to the credit of Mr. Backhouse on Calgary, who can show many acres of land giving 20 to 30 bags per acre and whose crop this season amounts to the very satisfactory grand total of over 5,300 bags.

Mr. C. Southey, on the Concession, has grown Golden Eagle, a yellow mealie, undoubtedly a heavy cropper and producing a heavy grain, but on account of its colour alone, rather out of fashion and damaging to the crops round about, for a few yellow grains at once alter the grade as regards export, from "flat white f.a.q." to "mixed." Where white maize is so definitely in vogue and where our best class of whites is at a considerable premium for export it is a pity to introduce another type, even though in itself a good one. The drawback to maize production at present is the high cost and slowness of transport to market by road, and Mazoe farmers live and continue to extend their mealie lands in the sure hope that the railway is coming. The methods pursued are as a rule well up to date, and the three, four and even five disc plough is busily at work. The lands are as a rule clean and well planted, but some farms are notorious for their Black Jack crop, and certainly some soils seem to favour the growth of weeds more than others. Harvesting by hand and shelling by hand-power machines are the rule, and a tedious process it is, but crops are now grown on such a large scale that it cannot be long before more economical mechanical means are sought to do this work.

Power shellers are still few and far between in Rhodesia. Mr. Kirkman at Stamford, near Salisbury, has had one in use for some years, and Mr. Bland, of Insiza, has shelled his mealies with power, but the credit of introducing the first large portable maize husker and sheller into Mashonaland rests with Messrs. Pretorius and Short, who have imported and used on the farm M'gututu a machine by Messrs. Ransome, Sims & Jefferies, of Ipswich, England. This outfit has since its arrival given complete satisfaction, and proved in every way an economy of time, money and native labour: the last

the greatest consideration of any. It is of the size indicated as "42in. drum," and requires a four nominal horse power engine to drive it. The machine has a capacity of 60 to 80 bags of maize per hour. Instead of laboriously husking crops in the field, and losing a few grains from each cob, the complete ear in the husk is conveyed to a convenient centre and stacked pending the arrival of the machine. It is well to have the maize on a raised platform or to make some other arrangement for feeding rapidly, for it can take more than can be readily fed into the hopper from the ground or out of racks. The ears are conveyed mechanically to the top and are fed into a drum. There is a steady hum, and the husks are thrown out so little damaged as to convey the impression that the ear is within, but this is never so. The cobs shoot out elsewhere, and are readily collected. There is no need to hand-pick them as is so generally the case with manual machines, for there are no grains left to pick off. Chaff and dust are blown out and broken grain, which is generally mixed with the whole grain in the usual process, are all separated out at one side. Though the total of this is trifling it yet secures that the bulk sample is pure and clean. At the end opposite the feeder the kernels gush out into sacks ready for sewing up. At one side a more gentle stream of mealies of extra large size may be collected, the choicest of "choice white flat" grade. The owners are very well satisfied with the results secured. There is no injury and no waste. No grain is dropped in the field or mealie hock, one white man and ten boys can handle and serve the machine, including sacking, sewing up, and stacking the bags, and do many times as much as three times the number of boys could with the hand machine. The crop can be harvested more rapidly and with fewer boys, as no husking is needed in the field.

There are many similar machines on the market though not in Rhodesia, and in our advertisement pages an illustration will be found of one by Messrs. Marshall & Sons, of Gainsborough, procurable from Messrs. D. E. Hockley & Co., of East London, as well as one of the same make as that seen at M'gutu, and for which Messrs. Tarry & Co., Bulawayo, The Bechuanaland Trading Co., Salisbury, and Messrs. Meikle & Co., Salisbury and Gwelo, are agents.



Arrangement for Shelling Mealies by hand
As used by Mr. Newmarch, Thorn Park,

With many individual crops of 2,000 bags, and not a few of 3,000 and 4,000 bags in the country, we cannot afford to neglect such labour-saving conveniences, and not another season should be allowed to pass without several being put to work in our maize-growing districts. Such a machine can with ease travel from farm to farm and handle in three or four days a whole crop, on which by present methods the farmer may be spending many weeks of his own and his boys' time, better devoted to clearing land, making bricks, or the hundred and one things which want doing on every well-conducted farm.

In perhaps a less ambitious way than the big power sheller at work on M'gutu, but with the same end in view, Mr. Newmarch, on Thorn Park, has devised a labour-saving device whereby with but twelve boys he can do what normally requires thirty, a big economy. He has constructed out of packing cases and rough native poles securely bolted together a platform mounted on runners which can readily be yoked to a span and hauled about the lands, especially where these are level and smooth as on the Gwibi Flats. A short ladder or stair runs up to the platform between the runners from the front of the sledge. Up these the ears are carried in sacks as shown in the illustration kindly furnished by Mr. Newmarch, and thrown into two hoppers, right and left, these in turn command the feed boards respectively of two ordinary manual "Lightning" shellers worked by "mealie pap power," and the cobs fall down below the platform while the shelled grain passes into a box with two outlets similar to those on a power sheller whereby continuous filling of the sacks is possible. This plan is certainly ingenious, cheap and applicable with advantage on many farms where the visit of the power mealie sheller is not yet possible.

With a narrow margin of profit, and such large quantities to handle as many farmers now have, every economy however trifling helps, and every bag of marketable grain must be secured. Another means of augmenting our profits without labour and at comparatively little cost is by the use of good seed which on the same soil and with the same treatment will give several bags more per acre than inferior seed. This is generally realised in theory, but in practice the difficulty has been hitherto to get reliable and good seed

and it must be regretfully admitted that while we can, as the results of the Johannesburg Maize Show convincingly demonstrate, produce the best, yet many of our crops leave much room for improvement as regards quality. This is unpleasant to contemplate, but as the desire to improve in this respect is very general it cannot be long ere improvement is shown; indeed, everywhere farmers are making an effort to get really good seed.

As far as tobacco is concerned, Mazoe promises to take one of the foremost places. A few years back a number of farmers built flue curing barns, but several of these have fallen into disuse, although, in view of recent developments some of their owners rather wish they had persisted. At Sleamish, Mr. Garvin grows over 80 acres annually and has an imposing line of six barns, together with other necessary outbuildings for dealing with his crop. Failure of the transplants to establish themselves during the trying weather accompanying the beginning of the rains is one of the chief anxieties of the tobacco grower, and to obviate this and to avoid replanting, also to extend the period of the planting season and give more time for harvesting and curing the leaf, Mr. Garvin has quite recently erected a gas suction plant for the purpose of pumping water into a reservoir from which it can be led on to the tobacco lands. By this means he secures a month or more start and avoids any doubt of the transplants coming away strong and rapidly and without those checks which are so inimical to the quality of the leaf. Other growers on a considerable scale during the past season were Dr. Sketchley, Glendale; Mr. Newton, Thetford; Mr. Marriott, Poortlock; and Mr. S. Biggs on Bellevue; while, tempted by the brighter prospects, a number of men purpose going in for tobacco tentatively next year to gain some experience before embarking on it on a larger scale.

Last year in the district some 160 acres were devoted to tobacco, and this is a trifle to what might be grown. Knowledge of the crop and an adequate and reliable supply of labour are the two essentials still needed, the others: suitable soil and a remunerative market have been proved to exist, and the quality of some of the samples grown are all that could be desired.

After the major crops come a number of others which are as yet only grown on a small scale. Potatoes could with ease be produced in any quantity and supplied all the year round if an adequate price for this somewhat exacting and laborious crop could be depended upon, but farmers have been very much discouraged in this direction, which is the more to be regretted as potatoes are so strongly recommended by our medical authorities as an anti scorbutic to be supplied to boys in the mine compounds and as a form of vegetable food which keeps well. Only about 60 acres of potatoes will be found throughout the whole district during the course of the present year, whereas, with reasonable prices and a reliable market, many times that acreage¹ would be planted. Farms vary in respect of the season at which they can best furnish potatoes, but by suitable combination an all-the-year-round supply should not be impossible to secure—the benefits of which in arranging contracts is obvious.

Onions require peculiar conditions, but this most valuable crop has been grown very successfully in several instances and its cultivation is likely to extend considerably in the district, the chief limitation being the market and the difficulties which seem to confront sellers as soon as they have more than a few bags to dispose of.

Beans, on the other hand, are usually readily saleable in larger quantities than farmers are able to produce this somewhat erratic and risky crop.

Ground nuts are advancing in favour. About 200 acres were planted last year and much more is likely in the present season. On the heavier soils this crop is somewhat difficult to handle, it is essentially suited to loose and even sandy soil, and offers along with manna, beans, pumpkins, rape, kale and mangold a useful purpose as an occasional change to the soil from a too frequent cropping of maize. Ground nuts deserve more attention than they have so far received.

Another crop being more and more grown now that the earlier and quite unreasonable prejudices against it are being removed, is manna for hay. In one or two cases considerable fields of this excellent crop are sown, but as a rule only a few acres mainly for personal use are met with. The area

under manna and Californian millet last year was about 200 acres. This being a bulky crop awaits the advent of the railway before much can be produced for distant markets. The current price of manna hay in Salisbury it may be remarked is about 7s. per 100lbs.

Oats are grown to a very limited extent on moist ground or under irrigation for horse feed, and barley is similarly sown on but a small scale. Only six acres of wheat, and these mainly experimental, are to be met with, but should irrigation extend along the valleys there is no reason to doubt that this will become one of the major and most profitable crops grown.

Linseed is also coming into prominence and grows well. At present the price obtainable is about $3\frac{1}{2}$ d. to 6d. per lb.—according to the purpose for which sold, whether feed or seed. The crop is one which might occupy a few acres on every farm, since there will seldom be a time when some animal or other will not be the better for a handful of grain or a few feeds of linseed gruel.

The Mazoe lemon, identical with the Cape rough lemon, and occurring wild in many places in the district in spite of ruthless felling by natives for the sake of the fruit, has long pointed to the possibility of citrus fruits doing well under cultivation, and a number of farmers have planted orange trees, the oldest being those at Esperanza, now showing some splendid specimens bearing heavily. Mr. Garvin has over 1,200 trees doing well, while elsewhere groves of 50 or 100 are met with. Recently the Mazoe Citrus Syndicate has taken up the matter on the farms Smithfield and Laurencedale and have so far put in upwards of 1,000 trees as a beginning. But these figures, amounting to about 5,000 trees altogether, are but a trifle to what may be done, especially, as is hoped, Rhodesia may cater for the European market as well as for local consumption. At present there seems to be a feeling in favour of seedling trees in preference to grafted ones. This is perhaps more due to the success of the former than to the actual failure of the other, but the matter is one which deserves closer study. For export, uniformity of flavour, quality, size and keeping properties is of primary importance and this is next to impossible to obtain from seedling trees. Another point of interest is the need of water. It is desirable

to keep all citrus fruits as far as may be out of frosty hollows, yet there can be little doubt but that it is an advantage to place the grove under a furrow, so that occasionally, perhaps but once or twice in the year at critical times, a good soaking can be given to the ground; for, though it has been demonstrated that oranges can be grown without artificial water, yet a greater security of return and a better crop is to be anticipated where on occasion water can be supplied.

The choice of sites is much influenced by these two considerations and further by shelter from cold and stormy winds. Almost every farmer has his orchard of varying size where everything imaginable is being tried. In individual cases perhaps everything has succeeded, but on the principle that one swallow does not indicate summer, the general impression left after seeing a number of instances is that our Northern European fruits are not adapted to a climate where the resting period of vegetation is so very feebly indicated, and that stone fruits, except perhaps the very earliest ripening varieties, which may escape, are too liable to injury by the omnipresent fruit flies, leading to the presence of maggots in the ripening fruits. Wherever the "mohobohobo" appears in quantity, and that is often, it may be well to go in rather for appropriate sub-tropical and tropical fruits such as bananas, pineapple, guavas, paw-paw, grenadilla, tree tomato, oranges and naartjes and their allies, also perhaps quince, roselle and loquat. These apparently do well with but a minimum of attention, and provide the remote country household with most welcome and necessary diet, as well as offering opportunities for a side line in the earning capacity of the farm.

Figures given elsewhere of crops and acreages would be multiplied several fold in a very few years, and a large population brought on to the land, were there but reliable means for conveyance of produce and requirements. Agitation in this direction has of course been on foot for many years, but a better case can be made out to-day than in the past; the people have gone out ahead of the track, not following it as often happens with colonisation elsewhere, and have proved the country. It is not difficult to prognosticate that at no distant date the cultivated area of Mazoe will

be several times what it now is. There is hardly a farmer not extending his lands, and new settlers are tearing up the ground as fast as they can. There are signs of a tendency to sub-division of the land into comparatively small areas, several men having lately bought such small holdings as five and seven hundred acres on which to farm, and which, without irrigation, is certainly rather little for the conditions prevailing, while some of the large land-holding companies are selling farms of one thousand acres. The utilisation of the abundant streams of water for irrigation purposes will very materially advance the crop-growing possibilities, greatly improving the prospects of dairying and citrus growing, and making the cultivation of potatoes, onions and vegetables all the year round so easily possible that farmers can meet the requirements of the mines for a steady all the year round supply of vegetable food. The mining industry, independently, desires railways for its fuller development, which in turn will give the farmer a good local market for perishables as well as for staple crops. At present, while prices for these commodities are high the demand is extremely limited and too erratic to cater for systematically. This satisfies neither producer nor consumer. However, in this direction prospects are bright, for mining activity in its early stages is observable everywhere, and the farmer lives in hopes of townships, or at least stations, almost at his door, and of mines—preferably on the adjoining farms. Naturally the close contact of the farming and mining interests leads at times to difficulties, but the advantages of a "live and let live" policy are so obvious that nothing is likely to be allowed to arise to the serious detriment of either.

