In the summer of 1946 a study group of fifteen Young Farmers' clubs came to Sweden. Together with some countrymen of mine, I happened to take care of them during part of their visit. We were just going to have a look at the Halmstad Co-operative Packing Plant, the director and an assistant acting as guides. There were both boys and girls among the party and I thought that perhaps the girls, especially, would not like to see the actual killing. Consequently, I asked if anyone wanted to stay outside and join the others later on in the refrigerator and the sausage factory. Of course the boys did not mind going inside, and neither did the girls. They had been nurses or veterinary assistants during the war and were accustomed to the sight of blood.

No one but Jean, a farmer's daughter of twenty-one, from somewhere in England, had any objection. I quite understood her, for in spite of the fact that I am the president of that co-operative, I do not like to see the killing of animals. She stayed outside, and...
sitting together on the steps of the office building we became rather good friends.

Some hours afterwards, when all that tiresome lecturing and looking around in every department was over, there was a rest. Then everyone was anxious to go downtown shopping. Many goods were still being rationed, but there were no shortages; and shoes, stockings, clothing, chocolate, etc., could be bought without any restrictions.

Jean and I walked around for an hour and a half. We passed through the old town gate dating from medieval times, and looked at the castle built by the Danish King Christian IV. It was erected when the southern Swedish counties belonged to Denmark, and is now the residence of the King's representative, the “Landshövdingen” or Governor, in the county of Halland. The actual “Landshövding” is a farmer from the Midlands of Sweden. We saw the old cathedral with beautiful red brickwork inside, and crossed a square where there had been a monastery during the catholic centuries. The foundations were marked in the pavement by the different color of the cobblestones. Last of all we went to the new town hall and looked at the interior, decorated with modern Swedish arts and craftwork.

I told Jean about all these things and how they were connected with our history. She got more and more surprised, and so could not help saying:

“Have you Swedish people really got a history and traditions and all that? I thought you had always been living a little outside the happenings and
events of the world. And you seem to have rather a
developed social and industrial life too. I didn’t
know anything about all that.”

I was just a little hurt. But taking everything
into consideration, how could she or any of her
colleagues know very much about our country far
up in the North, its history and general conditions.

POPULATION AND GEOGRAPHY

When I started writing this book, many people
from different countries came to see me. After read-
ing the first fifty pages they usually said, “Well, it
may interest our people, particularly the farmers who
have much the same problems. But we do not know
very much about Sweden and its farms. You should
give some of this background before you go into
details about Sweden.”

There are roughly seven million people in Sweden,
somewhat less than the population of New York
City. The country is about the size of California—
forty-one million hektar (103 million acres). Some
54 per cent of this area is covered by forests; 9.1
per cent is arable land, and 2.7 per cent grassland.
The rest are lakes and streams, peat moors, bare
mountains and rocks.

The landscape and character of the country vary
quite a lot in different parts. In the south and part
of the midlands there are fertile plains and a rather
dense population. Comparatively few people live in
the great northern part, most of that district being
covered with woods, forests and mountains. The
density of population in the Skåne-Halland Plain in the south is 300 per sq. mile, but in the Alpine and Moraine District of the far north it is only 2 or 3 per sq. mile.

The latitude of the southern part is about the same as Alaska, and like that territory, Sweden stretches far up into the north beyond the Arctic Circle. Thanks to the Gulf Stream, however, the climate is surprisingly good, particularly in the South and the Midlands.

Because of the large number of rivers and lakes, there is a good supply of electric power. All the towns, villages and industries, the main lines of the railways, and most of the farms are now electrified.

There is a great difference in the length of the vegetation period between southern and northern Sweden. In the north this is partially compensated for by the permanent light during the summer nights. However, the short northern growing season limits the cultivation of many plants, even in the better districts of Norrland. Major crops of this area are grass and six-rowed barley. Potatoes also have done surprisingly well. Such crops as grains, beets, oil seeds, etc., do not flourish. Cattle raising and dairying will probably continue to be the essential agricultural industries of Norrland in the future.

History

Throughout Swedish history, the farming population has always been the backbone of the country. Even during medieval times the Swedish peasantry
had a love of freedom far exceeding that of their colleagues in continental Europe. Toward the end of the medieval centuries, Sweden was often occupied by German and Danish conquerors, and the peasants suffered under foreign feudalism.

During the fifteenth and sixteenth centuries the national heroes Engelbreckt, Sture, and Vasa aroused the peasants to arms, and threw off the foreign aggressors. Final liberation came under King Gustaf Vasa, who is considered the founder of the present national state (in the year 1523).

There was a tendency toward feudalism during the Swedish "great power" period of the seventeenth century. This influence came from Central Europe during the time of the Thirty Years' War. However, the Swedish peasants were never actually in villeinage. Working together under King Charles XI, they managed to throw off their yoke and remain free citizens.

**NEW LAND POLICY**

The most serious drawback to Swedish agriculture around 1800 was the splitting up of the farms into small strips of land. Frequently there were twenty or thirty to each holding, mixed in with the other farms of the village.

The first step towards a change from this was taken by a private individual. The government soon saw the advantages of his scheme, and through acts of legislation villagers were forced to move out to the open country with their buildings, where they got their land all in one piece.
Farmers' Co-operation in Sweden

There was tremendous opposition among the rural population to these compulsory methods, but these soon proved to be most efficient, and farmers stopped grumbling. The traditional community co-operation within the village was broken. This was in some respects a drawback, but the new scheme made better agricultural methods possible. Fortunately the reform was undertaken at this comparatively early stage. Certainly there would have been many more difficulties had the scheme been tried at a later period.

From 1800 to 1870 the acreage of cultivated areas trebled. Three factors intervened, however, to retard the further cultivation of new land: a more liberal customs policy was introduced into Sweden, the great transoceanic grasslands came into cultivation, and wheat and corn were imported from overseas.

At the close of the nineteenth century, dairying and animal husbandry became more predominant. Many improvements in agriculture were introduced during this period, such as drain tile, rootgrowing, machinery and implements, and better livestock. Our first farmers' schools and county agricultural societies were organized about this time. They helped to spread scientific information about agriculture among the farmers.

FARM FACTS

There are now about four hundred thousand holdings. However, many of these cannot be considered farms. Some craftsmen have only a cottage
and just a few acres of land as a supplement to their regular jobs. The number of professional farmers is much nearer 300,000. Division of the land into large or small units is dependent upon natural conditions, especially the topographical character of the land. Farms in the midlands and southern plains have on the average about 35 acres of arable land. In the forest districts of these same areas, this figure drops to 16 acres per farm. In northern Sweden, the average farmer cultivates only 11 acres of land. This brings the national average down to 22 acres; but if the permanent grasslands are included, the arable land figures increase 5 to 10 per cent.

No doubt the average unit is surprisingly small. As a matter of fact, this is one of the greatest problems of Swedish agriculture. It must be pointed out, however, that woods and forests supplement many of the holdings, particularly in the poorer regions. In many instances, farms form a supplement to forestry.

Before the war about 700,000 people were permanently engaged in agriculture. Their numbers are now growing smaller, but with the fishing and forestry industries they still represent almost 30 per cent of the total population. It is considered a great advantage from a social point of view that the holdings are owned and operated mainly by the farmers and their families. Nearly 80 per cent of the farmers are owner-occupiers, while hired men make up only 25 per cent of the agricultural population.

Milk is by far the most important Swedish farm commodity, producing nearly 50 per cent of the agri-
cultural income. In the poorer farming regions, where commercial crops cannot be grown successfully, milk is the mainstay.

**Cattle**

There are three breeds of cattle. In the south, the black and white Friesians give high yields but a comparatively low fat content. However, during recent years the fat percentage has increased considerably, and many of the good herds average nearly 4 per cent butterfat. In the midlands and in many other parts of the country, the Red and White Swedish breed predominates. They originated from native cattle, improved by mating with Shorthorns and Ayrshires. The breed has been constant for a long time, and now bears little resemblance to the Ayrshires. The Red and Whites may be called "the breed of the country." Their yield is quite satisfactory and so is the fat content.

In the northern part, the small Polled White Mountain Cattle are the most popular. Their yield is not so high, but their milk has a rather high butterfat content of about 4 per cent.

In Sweden the bulk of our herds are dairy cattle. They are all bred for milk and butterfat, and we are paid according to the fat content. The cattle population varies between 2,700,000 and 2,900,000, nearly two-thirds of these being milking cows.

The average yield for the whole country is 780 gallons per year. There are, however, about 350,000 recorded cows in the country, and these yield approximately the amounts listed on page 26.
Fig. 1. White Polled Mountain cattle.

Fig. 2. A pedigreed herd of Swedish Red and White cattle.
Farmers' Co-operation in Sweden

<table>
<thead>
<tr>
<th>Milk Gallons</th>
<th>Fat per cent</th>
<th>Butterfat lbs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friesians</td>
<td>1,397</td>
<td>3.50</td>
</tr>
<tr>
<td>Red and Whites</td>
<td>1,111</td>
<td>3.85</td>
</tr>
<tr>
<td>Mountain Cattle</td>
<td>778</td>
<td>4.00</td>
</tr>
</tbody>
</table>

These figures have been increasing steadily since the introduction of milk recording in 1898. During the war they dropped a little, but now have passed the prewar level in spite of the fact that concentrates are rather short and have had to be replaced by silage made after the Finnish AIV method.

Hitherto there have been no special beef breeds in Sweden, but during the last few years breeders have become interested in Aberdeen Angus cattle. About 500 of these animals have been imported into Sweden as an experiment, but it is too early to judge whether this will be successful.

Hogs, Sheep and Poultry

Hog raising is an important industry, particularly in the southern part of the country where skimmed milk from the butter-making dairies forms an excellent feed with a high protein content. Before the war, Sweden exported large quantities of bacon to Great Britain, but with the shortage of feed and rationing of meat and pork that is no longer possible. Consequently, the number of hogs dropped from 1,300,000 in 1935 to 1,000,000 in 1945. During the war the figure was much lower.

Because more of our farm land is now intensively
cultivated, sheep numbers have dropped considerably since 1870. At that time, the figure was 1,600,000, but in 1951 they numbered about 400,000. During both world wars there was a rise, owing to the shortage of wool, but the figure soon dropped again. However, sheep still play their part within Swedish agriculture, particularly in regions where natural conditions demand that farming be carried out on a more extensive basis. This is true, for instance, of large mountainous areas in the north and the Isle of Goffland where the sheep can be fed very cheaply during the summer season.

Poultry are far more important than sheep, particularly for the small farmers whose egg sales often form a considerable part of their income. In southern Sweden, geese and ducks are very popular, in accordance with the St. Martin's traditions. In the county of Skåne it is considered that on November 11 every family ought to have a goose on the dinner table. Should the family be a small one, they may choose a duck as a substitute. The people of Skåne are great lovers of good food, and there used to be a saying: "A goose is a good bird, but it has one fault. It is too big for one person and too small for two."

**Horses**

Swedish farmers have always been interested in horses and horse-breeding. In the southern plains and the midlands the Ardenner breed is the most popular. It originated in Belgium but has been bred
Farmers' Co-operation in Sweden

in Sweden for a long time. The Swedish variety is smaller than the original Belgian horse. In the forest districts, particularly in the north, the North Swedish Breed has done very well in recent years. It is a comparatively small, lively but good tempered horse especially adapted to hauling timber. In 1932 there were 612,000 horses in Sweden, but in recent years their numbers have been declining rapidly due to the increased use of tractors and machinery. Some farmers have been forced to sell their foals to the slaughterhouses because there was no other market for them.

Mixed farming — both animal and plant production — is the usual practice in Sweden. In certain southern sections the farmers concentrate on plants exclusively. However, most of the farm income comes from livestock in Sweden. This is especially true in

Average Crops

<table>
<thead>
<tr>
<th></th>
<th>1901-05</th>
<th>1936-40</th>
<th>1941</th>
<th>1943</th>
<th>1945</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Bushels Per Acre</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Winter wheat</td>
<td>25.73</td>
<td>33.90</td>
<td>15.91</td>
<td>34.65</td>
<td>34.20</td>
</tr>
<tr>
<td>Spring wheat</td>
<td>20.67</td>
<td>26.91</td>
<td>19.18</td>
<td>21.56</td>
<td>23.79</td>
</tr>
<tr>
<td>Winter rye</td>
<td>22.94</td>
<td>29.32</td>
<td>21.83</td>
<td>29.79</td>
<td>26.29</td>
</tr>
<tr>
<td>Barley (Spring)</td>
<td>26.98</td>
<td>38.10</td>
<td>29.55</td>
<td>38.29</td>
<td>34.76</td>
</tr>
<tr>
<td>Oats (Spring)</td>
<td>32.48</td>
<td>51.02</td>
<td>34.29</td>
<td>41.26</td>
<td>39.87</td>
</tr>
<tr>
<td>Mixed grains</td>
<td>33.23</td>
<td>47.73</td>
<td>32.34</td>
<td>39.93</td>
<td>38.81</td>
</tr>
<tr>
<td>In Tons Per Acre</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vetches</td>
<td>0.63</td>
<td>0.73</td>
<td>0.48</td>
<td>0.61</td>
<td>0.58</td>
</tr>
<tr>
<td>Potatoes</td>
<td>3.97</td>
<td>6.47</td>
<td>6.74</td>
<td>6.58</td>
<td>5.29</td>
</tr>
<tr>
<td>Sugar beets</td>
<td>11.96</td>
<td>16.10</td>
<td>15.39</td>
<td>16.56</td>
<td>15.61</td>
</tr>
<tr>
<td>Mangolds and other roots</td>
<td>8.02</td>
<td>17.08</td>
<td>14.86</td>
<td>15.66</td>
<td>15.64</td>
</tr>
</tbody>
</table>
the poor soil regions and in the north, where the short growing season limits plant growth.

Out of the 9,140,000 acres of cultivated land, 8 per cent is used for wheat (most of it winter wheat); 5 per cent for rye; 25 per cent for oats, barley and mixed grains; 7 per cent for potatoes and roots; 45 per cent for leys and permanent grass; and 10 per cent for fallow.

It ought to be pointed out that these figures are averages for the whole country. In the best agricultural districts, farms produce twice the amounts of grains, potatoes and roots mentioned. The sugar beet is grown only in the very best sections, and the figures may be reckoned representative of good farm land.

On the whole, it may be said that Sweden feeds herself, and that production and consumption of food balance fairly well. Before the war there was some export of animal products and an import, amounting to a few per cent, of cereals for bread-making.

**WINTER FARMING**

In spite of the fact that this subject matter hardly falls within the scope of this book, it seems worthwhile to mention a few facts about the effect of climate on our farming methods.

For a period of from 2 to 5 months of each year, depending on the latitude, the soil is frozen and lying quite idle. The growing period is consequently limited, and we can hardly take more than one crop a year. We also require stronger and better insulated farm buildings than in the southern countries.
Frost, however, is not always a hindrance to farming. Especially on clay soil it produces a fine structure for spring work and drilling. Formerly, when we used only horses for ploughing, the farmers were in a hurry during the autumn to get all of their land ploughed. The appearance of tractors has changed things a lot, and now there is not much risk of having any unploughed land when winter sets in.

Sometimes winters are so hard that wheat, rye, rape, fruit trees, and even whole orchards are killed. Fortunately this does not happen very often. Frozen water pipes and frozen mangolds are sometimes a problem, particularly in the south where there is not so much snow. An even cover of smooth snow is an excellent insulator.

Snow drifts often hinder both rail and road traffic. I remember some periods in the early forties when we had to clear the roads every morning in order to bring the milk to the dairy. Excellent sledge roads and frozen lakes are typical of the winter landscape in these districts. There is a “permanent” snow for much of the winter season — which presents quite a contrast to the landscape and methods of transportation used during the summer.

Winter is forestry time in the north. While the fields are lying idle, the people go up into the woods to cut and haul timber. The small North Swedish horses are especially trained for hauling timber, and on ice-covered roads one horse may pull a load weighing up to five tons. If the hauling were done over bare ground, only a third as much timber could be moved per “horse power.”
On the frozen lakes you often see tractors and horses hauling lumber and wood across “winter roads.” Using the lakes as highways makes it possible to reach islands and peninsulas which are inaccessible during warm weather. There is some danger in driving on the ice when it first starts to freeze, and again at the end of the season when the ice is porous and unreliable.

On one occasion, many years ago, I personally had some experience with this. It was at the end of March, and the winter that year had been a severe one. I was crossing a little bay with a team of horses. Suddenly the ice broke and the horses disappeared. There seems to have been a rather warm current.

Fig. 3. Winter forestry helps supplement many farm incomes.
underneath, undermining the ice. Fortunately the bay was shallow, and the horses were standing with their heads above the surface. Some men on the shore saw the accident and came to my assistance. We managed to loosen the harness and pull the animals up on the side where the ice was thicker. I was afraid that the horses would catch cold, so I gave them a litre of brandy each, at that time considered an excellent medicine (now it is too expensive to be used for domestic animals). Then we rubbed them with straw and galloped them home to their stable. They didn’t suffer anything from their cold bath, and when I asked the veterinarians why the horses did not get pneumonia they simply answered, “Why should they? There are no germs in this climate.”

On the whole, we like a real winter, not only because we can do a lot of forest work, but also for the winter sports, of which skiing is the most popular. The young folks especially love the snow, and there are many winter traditions in Sweden such as the torchlight sleigh parties, etc.