

*What Our Farmers Can Learn
From Other Lands*

what our farmers can

norway italy switzerland sweden france egypt denmark

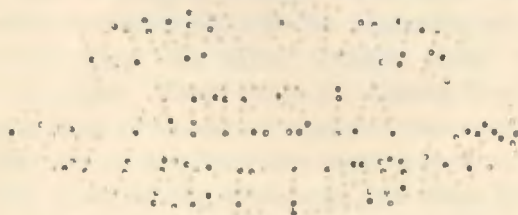


THE IOWA STATE COLLEGE PRESS
Press Building, Ames, Iowa

learn from other lands

turkey greece israel germany holland great britain

By *Ralph Sandlin Yohe*



*Copyright, 1953, by The Iowa State College Press.
All rights reserved. Composed and printed by
The Iowa State College Press, Ames, Iowa, U. S. A.*

Library of Congress Catalog Number: 53-7166

S215

Y75W

Foreword

WITHIN THE LIFETIME of many now living, the peoples of Europe and the Near East, far beyond the sea, were so remote as to seem almost like mythical beings.

The first World War took hundreds of thousands of young men into those far countries. Reading letters and news dispatches, and the eager searching of maps brought many formerly remote areas very near to our American homes. After the war, when cargoes of food from the United States were being sent overseas, we began to comprehend that these people and their children were not fundamentally very different from our neighbors down the road.

The coming of instant transmission of news by radio broadcasting, and the beginning of airplane travel across the ocean brought those countries even closer. Then came the second World War, with men of almost all nations intermingled, with your son or neighbor boy coming back as familiar with some of the European and Near East areas as he was with the home town.

The desire for world peace is the greatest hope in the hearts of mankind today. As we come to

know the people of other countries, we find most of them share this hope. The barriers to peace are the differences in points of view, the lack of understanding between us, and the distrust bred by centuries of wars.

It seems to me that there can be no greater service to our own country and to mankind than the furtherance of international understanding. No American can study the life and progress of other countries without a deep sense of thankfulness for our own country, and for the wonderful things that have been accomplished under our government based on the rights of men. We still must try to understand those peoples who do not share these blessings—even those who still suffer under tyranny and oppression.

Ralph S. Yohe, product of a Middle West farm, trained in accurate observation, has written of the people and places he saw on an extended trip through Europe and the Near East. He went not as a tourist but as an experienced student of agriculture. As you will find in these chapters, he was well informed in economics, and in those basic influences by which the lives of men are guided. He wrote what he saw.

You will find here many answers to the questions in your mind. You will not only learn what makes those "foreign" people think and act as they do, but you will have a better understanding of our own country, and what is the secret of its prosperity and happiness.

ARTHUR C. PAGE

Associate Editor, *Prairie Farmer*

Acknowledgment

The author wishes to acknowledge the help and assistance of Odd Kolberg, Norwegian trained agriculturist, who accompanied the author on the trip and whose knowledge of farming and customs in Scandinavia contributed greatly to the information contained in this book. The author also wishes to acknowledge the many friends and associates in this country and in foreign lands whose guidance, help, and friendly assistance made this book possible.

Table of Contents

1. Egypt's Unchanging Agriculture	1
2. Too Many Farms on Too Few Acres	9
3. Mass Education Essential to Farm Prosperity . .	18
4. Extension Should Not Carry a Club	27
5. Agricultural Monopolies	37
6. Britain's Guaranteed Farm Prosperity	44
7. No Place for Political Neutrality	56
8. Europe's Socialism Is Not for Us	60
9. Who Should Own the Land?	71
10. Nationalized Land	77
11. Who Should Inherit the Land?	88
12. Security for the Tenant	100
13. More Food From Every Acre	107
14. Trees, Grass, and Cows	116
15. The Forests — Our Neglected Income	121
16. Grass by the Tons	127
17. Tailor-Made Food and Livestock	135
18. North Countries Tackle Livestock Disease . . .	147
SUMMARY	158

Introduction

A MERICAN AGRICULTURE is beginning to look outward. Farm leaders are participating in international organizations for agricultural improvement. The traditionally isolationist and high-tariff Midwest finds itself supporting world-wide programs, and the benefits of international trade are discussed in town halls and schoolhouses.

As we begin getting acquainted with the world's farmers, we will be impressed by the extremes we encounter. We will discover that some farming sections are unbelievably backward. This will be no great surprise since American farmers have come to regard themselves as way ahead in everything.

But they will be surprised, and I think very much interested, when they learn that in some countries of the world, notably in northwestern Europe, soil management, animal husbandry, and crop production are in many respects well ahead of America's best. We can learn a great deal even while we set out to teach.

Ralph S. Yohe, an Illinois farm boy who was trained as a scientist before his excursion into

journalism as Farm Science Editor of *Prairie Farmer*, became keenly aware of these contrasts as he traveled through Europe and the Mediterranean countries. He sought out farmers in every country and spent a lot of time observing their farming practices and asking them about their needs and ambitions.

Mr. Yohe knows a progressive farmer wherever he finds one, and it is as natural as eating for him to bore in to find out what makes him tick. His enthusiasm for some of the things he saw in Europe was expressed in a series of syndicated articles for American farm magazines which set forth some of the progressive ideas in agricultural science that we can well put into effect in America.

As he traveled, Yohe made comparisons between what he saw in foreign agriculture and what he had experienced and observed in his own country.

He was drawn inevitably to a comparison of the economic systems as they affect the farmer. In these days he offers evidence that government controls and socialistic patterns not only have blocked progress of agricultural science in some countries, but they have conspired to rob the nations with highly developed scientific farming of many of the fruits of their work.

The experience of other nations in this respect has great significance in America because our own agriculture is at this moment in the throes of decision about acreage allotments, subsidies, soil conservation payments, price supports, and the

like. Is the British, or Norwegian, or Swedish pattern of controlled agriculture inevitable in America? Can we pick and choose good ideas and reject the bad? Which government programs have in them the means of stimulating an increasingly productive agriculture and which programs serve as opiates to ambition and opportunity?

These are only a few of the reasons why this discussion by Mr. Yohe is timely and very much to the point for all Americans.

PAUL C. JOHNSON
Editor, *Prairie Farmer*

CHAPTER 1

Egypt's Unchanging Agriculture

NAKHT WAS A MINOR OFFICIAL at the court of the great pharaoh, Thotmosis IV. Nakht, who lived about 1400 B.C., owned many fields in upper Egypt, near the capital city of Thebes.

In the spring, his workmen went out into the fields and turned the rich, Nile-made soil with heavy iron hoes. Other workmen crushed the stubborn clods with hammers and broadcast wheat over the small fields by hand. The thirsty laborers made frequent trips to drink from the goatskin jug hanging in a nearby tree. Laborers in three tiers lifted water in crude leather buckets to irrigate the fields.

In the fall, the workmen reaped the grain with hand sickles. Others carried the grain from the field in baskets. Lumbering oxen tramped the grain from the straw. Then the grain was tossed into the air to separate the kernels from the chaff. The farm supervisor measured it and made a record for his lord, Nakht.

At night, the peasant workmen walked back along the irrigation ditch to their small one- or

2 **Egypt's Unchanging Agriculture**

two-room huts in the crowded, disease-ridden, foul-smelling village made of sun-dried brick.

Nakht died. The court embalmers prepared his body for its voyage through the underworld to stand judgment before the great Egyptian god, Osiris. The king's artist painted on the walls of his tomb the scenes from his fields. The tomb was sealed. Blowing sands of the desert soon covered it over and Nakht was forgotten.

Well over 3,000 years have passed. The pharaohs' temples are now but colossal ruins, and the small farming village of El-qurna stands where American archeologists recently found the tomb of Nakht.

It was spring when I visited Egypt. The peasant farmers of El-qurna went out into the fields and turned the rich, Nile-made soil with heavy iron hoes. Other workmen crushed the clods with hammers and broadcast the wheat by hand. Thirsty laborers made frequent trips to drink from the goatskin jugs hanging in nearby trees. Laborers in three tiers lifted water in crude leather buckets to irrigate the fields.

At night, the peasant workmen walked back along the irrigation ditch to their disease-ridden village of sun-dried brick.

Nothing had changed. Farm life in Egypt is frozen to the pattern of the pictures that I saw painted in the tomb of the ancient landlord, Nakht. More than a hundred generations have brought little improvement.

I landed in Egypt at Port Said. Its harbor was filled with ships flying flags of many nations — ships waiting their turn to head down the Suez Canal for the Red Sea.

Irrigation Means Life

Four hours by American-made bus, the road to Cairo ran across several miles of barren salt marshes of the Nile Delta and then headed up a large irrigation ditch, past small Egyptian towns toward the flat, fertile valley along the banks of the Nile. The irrigated land, green with heavy crops of vegetables, broadbeans, and Egyptian clover, at times extended for several miles on either side of the ditch. In other places, great dunes of windswept sand were piled up to the very edge of the lifeline of water, a thousand-year-old struggle between man and the shifting desert. Here and there groups of swaying palms towered over dirty mud villages. The Egyptian peasant farmer, the *fellah*, spends his life in the farm villages surrounded by unbelievable poverty, filth, and disease.

All life in Egypt flows with the irrigation ditch. As we passed, there were groups of young boys swimming in the water. Ancient looking barges with limp, tattered sails moved up and down the ditch with loads of grain, pulled by men straining against the ropes stretching from the ship to the shore.

Along the edge of the canal a boy splashed water

4 Egypt's Unchanging Agriculture

on a water buffalo standing half-side deep in the cool water. Across from him a group of Egyptian women beat the dirt from clothing with sticks. Up and down, along the roads on the banks, jogged little donkeys with unsteady loads of firewood. Slow, dignified camels moved in twos, threes, and fours — in follow-the-leader strings — with sacks of grain or loads of stripped sugar cane on their backs.

On the six million acres of irrigated land along the Nile, three-fourths of the people of Egypt live the lives of peasant farmers, *fellahin*, in one of the most densely populated farming regions of the world. Between 1,000 and 1,500 people live on every square mile of land and raise with garden-like care three crops a year of grain, cotton, and vegetables. In the food markets of Cairo I found some of the largest leeks I have ever seen.

Once each year heavy rains in the heart of Africa pile up floods that move down the Nile, overrunning the level fields during August or September, leaving behind a rich layer of black, new soil and enough moisture for the *Nile crop*.

Later in the season, for a few cents a day, workmen put in long hours lifting water up the twenty-foot banks by poles. It takes three workmen at different levels to raise the water to the top of the bank. Used five-gallon tins that once contained motor oil occasionally substitute for the ancient leather buckets — the only improvement in the system since the time of the pharaohs.

In nearby fields, donkeys, camels, and water buffalo pull wooden plows on plots of land owned by the better-than-average farmers. The poorer farmers dig up their plots with giant sized hoes. Only the more prosperous farmers can afford work animals. But let me tell you about one Egyptian farmer.

Ahmed Abbah is a farmer in lower Egypt. He lives with his family in two rooms of a mud hut in a small farm village crowded along the banks of a main irrigation ditch. He rents three acres of land from a wealthy landowner in a nearby town. His rent is \$200 an acre per year. Three-fourths of the Egyptian peasant farmers rent their land.

By local standards, Ahmed is one of the better-off farmers in the village. He has a homely buffalo cow which his wife milks, a small donkey which helps plow the land, and a few variegated colored chickens that have the run of the village. His wife sells the milk and the eggs (when the chickens lay) to buy sugar and tea for the family. The family eats corn bread, cooked dried beans, and peas. They may even eat a few vegetables and fruit in season.

Ahmed is proud of his large pigeon roost, a dome of sun-dried mud. He may sell a few pigeon squabs in the market, but he really keeps the pigeons to produce manure for his small plots of land. Ahmed's biggest cash crops are cotton and rice. Cotton makes up about one acre out of every

6 Egypt's Unchanging Agriculture

five in Egypt, and furnishes the country's most important export.

To keep up the fertility of the soil and furnish forage for the work stock, he keeps at least one-fifth of his land in Egyptian clover, which he cuts from one to four times a year. Sometimes his wife and children pull the green clover, tie it into small bundles, and carry it on their heads to the village to sell in the market place.

Ahmed grows a small plot of sugar cane each year. Most of it his wife sells in the village. The peasants buy the stripped canes from her to chew as they walk along the streets.

Ask Ahmed what he needs most and he will tell you, "We need more land."

That's the big problem of the Egyptian farmer. Eventually Ahmed will have to share his land with his sons and their families. With a population increase of 1 to 2 per cent each year, and already three farmers to every acre, the present pressure against the land is one of Egypt's biggest agricultural problems.

Sons do not move to the cities to work in factories. They must stay on the land to eke out a meager living from the soil.

While yields here are among the highest in the world, the amount produced per man is pitifully small and explains in part the extreme poverty of the fellah. Tractors and modern farm equipment would merely disrupt further the agricultural economy of a country already faced with too many

farm workers on too few acres. A far greater need at present is projects that would increase the amount of irrigated land and new industries that would absorb some of the surplus farm workers.

The Egyptian government plans to build dams in upper Egypt to increase the supply of water for irrigation. Another plan calls for increasing for the fourth time the height of the famous Aswam Dam. In the delta, approximately 7,000 acres are reclaimed yearly from the salt marshes. Even these programs will only partially solve the need for more farm land.

Next to the land shortage is the need for factories that would absorb some of the surplus farm labor. Adventurous capital has been lacking in Egypt. Those who have money to invest generally have invested in buildings or land that would return a high income with little risk. Factories with their greater risk have not appealed to Egyptian capital.

With extremely low income, the uneducated fellahin is the victim of too little land — generally owned by someone else. Here ancient farming goes on as it has for thousands of years.

American Contrast

John Parks owns a 200 acre farm in central Illinois. His grandfather broke the land with oxen hitched to a wooden plow whose iron point was held on with leather thongs. In the evening his grandmother spun the wool from their 30 head

8 Egypt's Unchanging Agriculture

of sheep to make crude homespuns for the youngsters who walked three miles to a log schoolhouse.

Today John Parks and his two sons sit on the shiny tractors and watch the long furrow of dark, rich earth turn over behind the tractor. In the fall, combines move across the rich fields of soybeans. Two-row corn pickers husk out the golden corn.

Each morning the yellow and black painted school bus stops to pick up the two youngsters, Nancy and Ted, to whisk them off to the big brick community school in the nearby town. Nineteen-year-old daughter, Jane, is a sophomore at the university.

Quite a contrast to the plodding Egyptian fellah and his miserable family!

We are a new country. Europe and the Middle East are old countries. There, agricultural problems frequently are amplified. Yet many of them are like the problems we ourselves face. There are lessons that we can learn from these countries. In the remaining chapters we'll look at the agriculture of Europe and the Middle East, for here we can find lessons that should help us build our own agricultural future.

CHAPTER 2

Too Many Farmers on Too Few Acres

THE WORK REQUIRED to build the pyramids of Egypt was as nothing compared to the patient Italian farmer for centuries building his stone walls along the flat valley land to separate his fields, or around the steep mountain sides to hold a little soil for his vineyard and orchard.

Along the coast of Amalfi in southern Italy, I saw dark green lemon trees loaded with thick clusters of waxy, yellow fruit — clinging desperately to small terraced plots buttressed by 20- and 30-foot walls. Frequently a high wall holding up the soil took more square feet of space than the small plot of soil it supported against the steep mountain side.

Because of the thin layer of soil, the farmers must prune the trees to keep them from growing too big for the roots. Seldom do the Italian farmers allow the lemon trees to grow more than six feet high. The new branches are tied to a framework which limits the growth of the branches and helps protect them from the frost. Over the top

10 **Too Many Farmers on Too Few Acres**

of the trees in the fall they place mats of young evergreen, oak, or chestnut branches with the leaves left on to protect the tender lemon trees from the winter. The mats make a kind of roof over the trees.

The terraces represent a huge investment of time and money, somewhere between \$3,000 and \$8,500 an acre. Much of the money was originally furnished by immigrants who came to this country at the turn of the century and sent their savings back to Italy.

Here the average farm is only one to seven acres. Frequently the family must hire themselves out to the larger farms or rent a nearby farm on shares. By our standards, wages are pathetically low, fifty cents to a dollar a day, including food.

Italy's first agricultural problem is how a rapidly increasing farm population can make a living on poor soils. Nearly 40 per cent of Italian farms are in the mountains, another 40 per cent on hill land, and only about one-fifth in the rich valleys. Said one farmer in northern Italy, "There are just too many Italian farmers."

The Farmer's Story

Desantis Giacomo is a 35-year-old Italian farmer near Pontecagnaso, a little town south of Salerno in southern Italy. For two years a prisoner-of-war in England, Desantis speaks excellent English. He still keeps in touch with English friends. Desantis' 90-year-old father, now retired, spends his days puttering around the farm, keeping the account

books or driving into town in his small cart. The Giacomo homestead, a cluster of white-plastered, sturdy, stone buildings, crowd around a courtyard with trimmed sycamore trees. A tall palm tree at one corner of the house, according to Desantis, gives the place "a colonial outpost look." With its neatly kept orchards of apples, pears, and oranges, its flat, rich irrigated fields, and the snow-covered mountains in the background, the palm is the only outpost-looking part of the farm.

As we walked down the lane where Allied troops once camped — the farm is only a short distance from the Salerno beachhead — Desantis pointed to three teams of white oxen with graceful, upsweeping horns. "We are now plowing for tomatoes. Each year we grow about 600 tons of tomatoes."

Like much of the land along the coastal plains of Italy, this land has been drained and is now irrigated by networks of ditches. As early as the 12th century, monastic orders began draining the swamps and laying out ditches for irrigating the meadows of northern Italy. Since then no European country, with the possible exception of Holland, has reclaimed more land by drainage. A total of six million acres has been reclaimed. Now, with ERP aid, \$60 million is being spent to drain and irrigate additional land. Present government programs hope to eventually irrigate over one and a half million acres.

At the end of the field we came to an open pasture along a pleasant stream. Twenty head of inquisitive water buffalo cows watched us as we

entered the pasture. For a moment I felt as if I were back in Egypt.

"Buffalo cows are very hardy in southern Italy," explained Desantis, "and very intelligent. When they have calves, the boy who tends them calls out each cow's name and she comes up to the gate to be turned in as her name is called. The cows average only about 20 pounds of milk a day, but it contains 18 to 20 per cent fat. It is made into butter and *mazzarella*, a soft, white Italian cheese. Regular cows' milk sells for 50 lira a liter, about \$1.50 per hundred pounds. Buffalo milk sells for twice that, or about \$3.00 a hundred."

With the exception of some very high grade dairy herds, much of the livestock of Italy is unimproved. While the number of cattle in relation to land looks fairly good, it is pitifully small compared to Italy's population—less than two head of cattle to every ten people. America's ratio is five head of cattle to every ten people. This may explain the high price of meat compared to other foods and the low amount of meat eaten by the people, an average of 40 pounds a year for the whole country. Milk is pretty much of a luxury and is drunk only by babies and small children. With most cows infected with tuberculosis and brucellosis, all the milk must be boiled.

Political Unrest

Past the creek, my Italian farmer friend showed me a low pasture now plowed up. "I shouldn't

have plowed it," he said. "It's too low to grow crops. But today we farmers sometimes plow land unsuited for cultivation to avoid criticisms from the communists that the farmers aren't trying to produce food."

I heard a similar pattern of fear at the street cafes in Rome and from landowners on the rich farms in the north. Even today, with the threat of the communist to the government pretty well over, the discontent of the under-paid workers in the factories and on the farms rings loud in politically restless Italy. Said one large farmer in the Po Valley in northern Italy, "The same people who marched at the head of the fascist parades now lead the communist rallies."

Faced with this fear, forward-thinking citizens know that the future of the Italian democracy rests on solving the problem of too many people for too few jobs, too many farmers and farm laborers for too few acres.

Other landowners and businessmen dream of the regimented order of fascist days. I was surprised how frequently someone would say, "Mussolini wasn't so bad, he only made the mistake of going to war on the wrong side." Some of these people today would gladly sell their birthright of political freedom for order and protection against the masses of poor people, most of whom are uneducated and easily led by the ridiculous promises of every would-be leader.

"I have only one tractor, somewhere between

14 Too Many Farmers on Too Few Acres

20 and 25 years old by now," said Desantis. "I'd like to buy a new one, but they cost too much. A new English-made tractor costs \$2,300. And that's a lot of money for an Italian farmer."

Greatest handicap to mechanization in Italy is the high cost of farm machinery, the high cost of fuel and the surplus of farm workers.

Take the farm of Salvoni Sante I visited near Milan. Sante's 200 acre irrigated farm is in the rich Po River Valley. His 35 Brown Swiss cows average nearly 10,000 pounds of milk a year. Last year his fields of American hybrid corn hit 130 bushels per acre. His fields of wheat averaged 80 to 85 bushels. Every square foot of his farm is intensely cultivated. Rows of pruned mulberry trees line the lanes to the fields. Once silk worms grew on the mulberry trees, but today the nylon industry has pretty well wrecked the Italian silk industry. Salvoni Sante would be a good farmer in any country.

He asked me how many people would it take to run a farm this size in America. I told him perhaps two if it were a general purpose farm. Maybe three if it were a dairy farm. Sante has 35 farm workers. The government, confronted with problems of unemployment, forces the farmer to employ one man to every seven and a half acres of good land. "Including the families of my 35 farm laborers and my own family, 116 people must earn their living from my farm," Sante told me.

With a surplus of farm workers, the Italian

farmer just can't afford to pay high wages. In America new factories drain off the surplus farm people, and these new city folks furnish an increased market for farm products. What is more important back on the farm, there are only 3 people to share the farm pay checks instead of 35.

Holding today's farming limelight in Italy is the government's program to break up large estates and land holdings in the south, many of them poorly farmed. With wide political appeal among the tenant farmers, the program will bring into cultivation much poorly farmed and idle land.

More important are the irrigation and drainage plans under the European Recovery Program, that will bring many more acres under intensive cultivation. This is part of the over-all plan to put Italy on its feet.

On the eastern coast near Venice, I saw a farm by motorboat. One large industrialist is spectacularly reclaiming 2,500 acres of land now covered by water and marsh reeds — digging out channels and piling the dirt into islands surrounded by dikes. In the end he will have 1,500 acres of channels, 1,000 acres of land. On this Venice-like farm, landing craft left over from the war take the cattle out to graze and haul back fruit grown on the islands. In the channels the industrialist plans to grow fish.

Even though irrigation and drainage will eventually add thousands of acres of land to provide food and jobs for Italians, the country will still be faced

with the problem of providing work for a rapidly expanding population. With the possibility of emigration limited, Italy must eventually find jobs in factories for many of its farm people. Industries must someday absorb large numbers of people now working under various regulations forcing farmers to employ surplus labor — that is if the living standard of the people is ever to go up very far.

In Italy too many people must earn their living from the land — 45 per cent in the rich Po River Valley, 85 per cent in over-crowded southern Italy. There are nearly 500 people for every square mile.

In prewar Germany or tiny Holland, with even more people per square mile, only 20 per cent of the people work as farmers. The rest move to the cities and towns to work in factories.

The first lesson that I learned in Europe was that a prosperous agriculture depends on an ever-expanding economy. New factories drain off the surplus farm people and furnish a market for farm products. What is equally important, the farm income is divided among two or three families instead of ten or twelve.

If we in America had not had expanding factories to absorb the surplus farm people, we too would have been faced with the problem of providing jobs on the farm for an increasing number of farm people. This, in turn, would have pushed down farm wages and earnings of farm families. It would have prevented modern mechanization

and started our own farmers on the road to peasantry.

Farm prosperity in America, as in Europe, depends upon the trek of people to the city.

CHAPTER 3

Mass Education Essential to Farm Prosperity

TWENTY MILES from the modern Turkish capital of Ankara is the little farming village of Hasanoglan. Here the Turkish peasant farmer, Mahir Kabas, lives in a flat adobe house by the side of a narrow street filled with barking dogs, little donkeys packing huge loads of firewood, children in tattered clothes, and women in the brightly colored dresses of old Turkey. Hasanoglan, like most of the peasant villages of Turkey, belongs to the Middle Ages.

Every week Mahir's wife takes the dirty clothes down to the village spring to wash them. Each day she takes the used pots and pans down to scour them out. She always uses the right side of the spring. Down the crooked, narrow street, Mahir Kabas drives his little flock of seven sheep, four goats, and three half-starved cattle. They drink on the left side of the spring.

Life is hard for the peasant farmer. In most villages there is no electricity, few roads to the outside world. Sanitation is almost non-existent and children suffer from malnutrition. Young wives

die under the hands of fumbling midwives. Sixty per cent of the people of Turkey live in these peasant villages.

Mahir will probably continue to farm as his father, as his father's father, as Turkish farmers have done for centuries. Even if farm bulletins and magazines were available — and they are not — Mahir could not read them, for he has never gone to school.

This is the old Turkey.

Village Institute

Every morning Mahir looks out of the window of his crowded adobe hut, down the valley toward the cluster of light tan buildings of the Köy Enstitüsü. Directly translated, Köy Enstitüsü means *village institute*. Rural life institute might be a better name. But under any name it is Mahir Kabas' greatest hope for a better life for his children.

The Hasanoglan village institute, the first and largest of twenty-one similar schools strategically placed throughout Turkey, is a boarding school for village farmers' children. It is designed to train rural leaders for the peasant villages.

When we called, Kemal Üstün, the director of the institute, was working at his desk under a large portrait of Atatürk, the founder of modern Turkey. Üstün prefers to stroll with his hands behind his back across the assembly ground, through the buildings from class to class, or teach a class

himself. A sincere and highly practical man, Director Üstün has little patience with fancy talk or high flown theories. He wants to teach the students of Hasanoğlu institute the practical things that will help lift the living standards of the village peasants.

Eleven years ago, we were told, the first students arrived at the school. A level strip of semi-arid land greeted them. They lived in tents and were taught in outdoor classes. Today the institute is a model village in itself, complete with Turkish bath. Built by the students themselves, the buildings house not only the classrooms, dormitories, and dining halls, but the school's own cooperative store, bakery, music hall, workshops, hospital, and buildings for the livestock. An open-air amphitheatre is used for summer meetings and summer dramas.

Director Üstün supervises a staff of 50 young teachers. Graduates of Turkish colleges, each instructor is a specialist in his own field. The 945 students at the Hasanoğlu institute, like the students of the other twenty schools, were selected from the outstanding students of the village five-year elementary schools.

Each fall the new class arrives in small groups from the various peasant villages, most of them still dressed in peasant clothes — the best that their families can scrape together for the trip.

They spend the first year in preparatory classes, after which they become full fledged students. Said

one of the girl students, Meliha Bas, "I was homesick at first, but now I like it here."

"Foremost in the institute's training," Üstün explained as we walked across the assembly field, "are the courses that teach the farm youth the things they should know out in the villages: how to build sanitary toilets, how to use steel plows that scour, how to practice fallow cultivation, and how to build warm houses from material at hand. The girls also learn midwifery. The school has its own hospital for the students and the nearby village people. Hygiene is taught by doctors and each student must work in the hospital for at least three months." Üstün could not speak English, but Sevkettü Tükyilmaz, the government school inspector who spent two years in America studying American school systems, translated for us.

Snow covered the grounds of the institute and the hills that swept back from the valley when I was there.

"You should come in the spring," said Director Üstün, "for then you would see the students out in the fields, plowing the land, planting grain, pruning the apple trees, planting new grape arbors or tending the cabbage, turnips, and carrots in the gardens.

Our initial stop was the first year art class where we saw students from 12 to 14 years old. Model reliefs of horses and cattle in modeling clay lay on the tables. The walls proudly displayed the week's best watercolor paintings by the students.

Most of the paintings showed village life — boys in red caps in a snowball fight, groups of merry skiers sliding down a steep hill, a wedding march through the village with drummer and flute player preceded by the red Turkish flag with its white star and crescent, harvest scenes of brightly dressed peasant farmers' wives riding a threshing drag hooked to a team of oxen, or farmers tossing the straw into the wind to separate the grain from the chaff.

Favorite subject for painting was Nasrettin Hoja, a legendary village farmer, familiar to every farm child. Here was a painting of Hoja's trip to the mountain to cut firewood. On his way back he runs into a snowstorm. To keep warm, Hoja sets the wood on fire without taking it off his donkey's back. Or there was a picture of Hoja on his deathbed giving instructions to his wife where he should be buried. On the way to the cemetery the funeral procession takes a wrong turn. Hoja rises up from his coffin and sternly commands. "That's not the right road. Turn left."

We went from classroom to classroom — to the botany class with its dried plants, the hygiene class with its skeleton and colored anatomical charts, the agricultural classes with their samples of improved wheat and barley, and a large picture of an irrigated field in Colorado.

After lunching in the dining hall on Turkish foods — rich brown bread, flour soup, rice with bits of kidney, stewed apricots, Bursa cheese, grape-

fruit-sized oranges, and black, thick Turkish coffee — we went to the many workshops where the students learn blacksmithing, metal work, carpentry, and woodwork. At one of the forges in the blacksmith shop we saw a 12-year-old lad wrestling with a hammer nearly as large as himself, shaping an irregular piece of iron into a large ring. The busy instructor explained that this was the beginning class and the students were learning to use the hammers to shape the metal into useful forms. The older students make everything from shovels to doorlocks complete with key.

Long lines of looms and spinning wheels lined the walls of the domestic arts shop. Here the girls — there were 36 at Hasanoğlu institute — spun cotton into thread and wove the thread into brightly colored traditional Turkish patterns. Later, in the girls' building, we saw them cooking their own meals, scrubbing the dining room floors, sewing their own garments. The domestic science instructor showed us elaborate costumes that the girls had made — dresses traditional in their own villages, and latest style clothes sewn on American-manufactured sewing machines.

Now and then I noticed students with red bands on their sleeves, dashing in and out of the buildings. Tükyilmaz, the government school inspector, explained that these were a part of the student governing body. "Every week the students run the student functions of the school, administer student discipline and are responsible for the

student body. This program of self-government stimulates democratic thinking and trains leadership among the students."

In the evening, after supper, we walked out through the new apricot orchard, past an open air amphitheatre, and up a slight slope to the music hall. Already the hall was packed with students and instructors for the special program for "their friends from America." For the next hour and a half we listened to Turkish music and watched Turkish traditional dances. A group of 50 students sang Turkish traditional songs, many of them about heroic figures of Turkey, plus a Turkish version of *Home, Sweet Home*. Small groups of students with flutes, native string instruments, and tambourines played; while the boys and girls, each group dressed in native costume, danced the dances of their own villages. Some of the dances were slow, rhythmic, and graceful, others fast, with increasing tempo. Boys clicked knives together in dance duels and the girls in bright red, blue, yellow, and green costumes danced to the beat of their tambourines the exotic dances of old Turkey.

An orchestra of nearly 50 mandolins played some of the most melodious music I have ever heard.

After our "thank-you's," we stopped for a genuine Turkish bath at the bathhouse, complete with pouring cups and Turkish towels — then on to our guest rooms for the night. As I lay in bed in the still of the Turkish night, I could not help but

think of the huge problem that faces Turkish agricultural leaders and educators.

Sixty per cent of the people of Turkey live in the 45,000 villages. Today there are 7,000 five-grade schools and 4,000 three-grade schools. The rest of the villages are without schools. That means that some 40 per cent of the children of Turkey do not have the opportunity to go to any school. Most of Turkey's farmers today are peasants, uneducated and living their lives in poverty. Said Sevkettükyılmaz, "The twenty-one village institutes turn out 2,000 students a year. By expanding the institutes, we hope to have schools and teachers for the children of every village by 1960. With the schools and the leadership that these young men and women leaving the institutes take back to the villages, the village farmers should someday contribute much to the prosperity of themselves and to the Turkish Republic."

It seems to me that on this promise rests much of the hope for Turkish farmers. This would truly be the new Turkey.

I am convinced that a prosperous agriculture, as well as a prosperous country, depends upon the mass education of its people. Educated people can be taught. Highly adaptive, they can change from one type of business to another, one type of farming to another, to better their living standards.

The great progress of American farmers has rested firmly on the foundation of mass education. Educated American farmers were able to grasp

quickly technological changes and put them to work. This made the extension man's work simple. Because the farmer could read and understand, bulletins and farm magazines could carry to him the story of better farming and better farm life.

We cannot afford to rest on present accomplishments. New findings in the field of insecticides with their jumble of names, new fertilizers, and new scientific research must be interpreted by these farmers. Farming has become, and will become even more so, a highly specialized field calling for a great amount of technical knowledge. *Our educational facilities must keep pace with these findings if we are to push back further the frontiers of agriculture.*

Extension Should Not Carry a Club

ONE AFTERNOON I sat in the stuffy second floor office of a French county agent in Rouen. I had some difficulty finding the office because of bombed out streets now being rebuilt. Whole blocks of Rouen were reduced to rubble during the invasion of Normandy. You probably remember the city as a place famous in history, for here Joan d'Arc was burned at the stake.

Peering at me from behind heavy, dark-rimmed glasses, the county agent told me about farming in Normandy. Rouen is the principal agricultural extension office for the province of Seine-Inferieure. France's county agricultural agents are very well trained for their jobs, and have much larger territories than ours. Frequently one agent may work with six to seven thousand farmers.

Devoting much of his time to herdbook keeping, seed certification, and other supervisory work, the French agent frequently finds himself contacting only the better farmers. There are no free bulletins on farming similar to those given out by our own extension service. He attempts to contact the small farmer by writing short articles or notes on

farming for the local and agricultural papers. In the larger cities he may have a radio program.

Here and there, as I drove along the straight French highways, I saw signs pointing out different plots of grain. They were demonstration plots set up through co-operating farmers.

Nowhere in the world will you find an agricultural extension service as effective as ours in America. Only in Scandinavia and Great Britain has it reached anywhere near the same level. In many countries of Europe the extension specialist has been greatly handicapped because he has lost contact with the small farmers and there has been little, if any, agricultural training among the youth.

I think some of our agricultural greatness, and our country's agricultural future, depends upon keeping a virile, helpful extension service. European and the Mediterranean countries can teach us much about how to keep extension effective.

Lack of a good extension service explains some of the sharp contrast between the primitive agriculture of Egypt and her ministry of agriculture. With her up-to-date experimental stations and highly trained specialists, many of whom have studied in Europe and America, Egypt has built one of the best departments of agriculture in the Middle East.

Egyptian experiment stations have developed important varieties of cotton, sugar cane, rice, wheat, and other grains.

The big drawback has been the lack of an American-type extension service and an elementary educational system to equip the farmers with the knowledge learned in the experimental stations. So far, the work of the Egyptian agricultural department has been largely directed at control and regulation, or "government knows best" directives.

Two agricultural colleges, one in Cairo and another in Alexandria, are staffed by well-trained people. Agricultural vocational training, however, as we know it in this country, simply doesn't exist in Egypt. Most of the village children never even attend elementary school. Modern scientific findings just don't get out to the peasant farmer.

Greek Extension Work

Today in Greece, under ECA, American experts are helping to build an American-type extension service. In the past, Greek extension men have been regulatory officials. The new plan is already paying off.

Let me tell you of one project.

Last fall, near the ancient city of Anthele in central Greece, Greek farmers harvested a heavy crop of rice in fields that only a few months before had been nothing but a dead salt flat with deep cracks crisscrossing the heavy alkali mud. Over a thousand years before Christ, Anthele was an important seaport on the Greek coastline. For the last 3,000 years, the Sperchios River has carried silt from the sloping fields and dumped the soil into

the gulf. Mixed with the salt water of the sea, the rich silt built up a huge delta of useless flats, leaving the port town of Anthele miles from the sea.

Today, Anthele is a typical farm village with about 300 families who farm the 6,000 acres of cropland nearby. Before reclamation, almost two-thirds of their land, 9,000 acres, lay in the useless barren salt flats.

Reclamation began under the direction of Walter E. Packard, drainage specialist for the ECA mission. On the job to help with the project were American and Greek agricultural experts. Packard told the farmers gathered in the village square that much of the land could be reclaimed if they grew rice on it for a few years. "The land is not too salty to grow rice, and after a few years of flooding you will be able to grow other crops, since the flooding will take the salt out of the soil," Packard told the skeptical farmers.

He explained that the Greek government, aided by ECA, would furnish the money and trained men to help drain the land and provide for flooding the rice fields. He suggested to them that they try 100 acres of rice.

Perhaps with the thought that they had a chance to gain, and nothing to lose, the Anthele farmers agreed to try rice, even though many of them doubted that anything could be made to grow on the worthless flats.

First the land had to be drained, irrigation canals dug, the course of the river changed, and even sea walls built to keep the sea from flooding

the land at high tide. The first year about 100 acres were planted. The land belonged to 40 villagers, each with his own plot. Within a week the work of ditching and ground-leveling began. The seedbeds were flooded and villagers broadcast the rice by hand.

The first year, rice yielded 82 bushels per acre, a return of \$440 an acre. The farmers now want to plant all their acres to rice. Says Farmer Tangoules, a hard-headed dollar-and-cents thinker, "If I plant wheat, I can get only 1,500 drachma per oke of land. Cotton brings about 4,000 drachma, but my rice fetches me about 6,500 drachma." Many farmers agree with Tangoules.

The lack of irrigation now prevents the farmers from putting all the bad land and most of the good land into haphazard rice plantings. Individual farmers just don't have enough money to pay the high cost of digging ditches and constructing rice plots. In the meantime, the Greek government with money from ECA plans to increase the reclaimed acreage.

"It's just like the miracles in the Bible," says George Rokas, a 57-year-old farmer, who once lived in America and returned to Greece in 1912. "If we hadn't seen it happen on our own land, we would never believe it. Now we understand what scientific farming can do." Rokas' knowledge of the United States makes him somewhat of a local authority among the villagers when America is discussed.

Four other similar projects, under guidance of

ECA specialist Packard, are now growing rice in Greece. Today, Greece spends nearly two million dollars a year of its foreign exchange to buy rice. Rationed rice costs the housewife 22 cents a pound. It brings 80 cents to a dollar on the black market. "Soon," says Packard, "Greece hopes to produce enough rice to provide its needs."

Less spectacular, but just as important, are other ECA-assisted agricultural projects, many of them still on the drawing board. What helps Greek agriculture vitally helps Greece, for Greece is an agricultural country. Two-thirds of its seven and a half million people live on the nearly one million Greek farms. With an average yearly income of \$260 per farm, the Greek peasant farmer stands among the poorest in Europe. Even so, its nine million acres of farm land have never furnished enough food to feed the people. Farmers still use crude wooden plows hitched to slow-moving oxen. Many of the vineyards are dug up by hand. Even though Greece has a lack of water for the soil, its rivers, with plenty of water, flow untapped to the sea. Even though Greek hills have eroded for centuries, farmers still plow up and down the slope.

Problems in German Agriculture

Some countries, with highly developed scientific agriculture, have sacrificed extension work to government police work. Germany is a case in point.

I spent some time in Bavaria in the heart of the American zone. I wanted to see what recovery western German agriculture has made. Germans told me that the most recovery is in the American zone, the least in the French zone. My base of operation was the Stachet farm, a country *gast haus*, some miles east of Munich. In addition to the guest house, widely known for its good food, the typical Bavarian farm keeps a dairy herd of large tan and white milk cows. These *Simmenthalers* are a Swiss breed used by the German farmers for milk, meat, and work.

Outstanding in Bavaria are the dense pine and spruce forests, and the lush permanent meadows, some of them 100 years old — about 30 per cent of the land is in meadows. The Bavarian farmers told me that not only do the forests bring in a nice income, but they maintain a high water table and attract an evenly distributed rainfall.

Prewar industrial Germany, with 80 per cent of the people in cities, imported much of its food from surrounding countries. Now, with much of the farm land of Germany in the Russian zone, agriculture has taken on greater importance than ever before.

To see what was being done to speed up food production, I visited the nearby town of Ebersberg where an "intensified" extension program has been set up under the guidance of the American occupational government.

The equivalent of a county agent and six field-

men make soil tests, teach intensified land use, improved pasture management, forest management, and home demonstration for the farm women. The knottiest problem tackled by the service is land consolidation. With land continually divided by inheritance, many a farmer finds his farm scattered, in garden-sized patches, over the entire community. I was told of one farmer who would have to travel nearly 500 miles to visit all his plots.

On the wall of the extension office I saw before and after pictures of large blocks of land made from haphazardly scattered plots. Such undertakings are not easy. Many farmers are reluctant to give up patches of land that may have been in their families for three or four hundred years. Thrifty individuals may hesitate to trade plots that have been heavily fertilized for poorly kept plots, even though they may be closer home.

Greatest help in building democratic farm leadership would be an aggressive 4-H club program. German farm youth organizations do exist, but they are hardly farm leadership factories like our own 4-H clubs. Such organizations must spring from the bottom up. Germany has always had too much "from the top down."

Perhaps the greatest disadvantage in Germany's present agricultural extension service stems from the days of the Nazi regime. After the first world war, the service managed to build back most of the confidence of farmers lost during the war. Even in the early Nazi days the extension service



Fig. 1—Dairying is important to the Norwegian farmer. To protect the price, milk is sold under a public utility monopoly (Chap. 5).



Fig. 2—Ahmed levels his field for irrigation. Life for the Egyptian fellah goes on as it has for centuries, little changed from the days of the Pharaohs (Chap. 1).

was able to accomplish much. Once a project was started the entire force of government was put behind it. Then came German rearmament and the "guns or butter" program, along with strict controls. Saddled down with directives and police work, the extension department was no longer a friendly adviser to the farmer, but a farm gestapo. Completely dictatorial, the extension service operated independently of farmers' wishes and received its instructions in a chain-of-command right down from the top. It is not easy to gain back the lost confidence of the farmer even though the extension service no longer carries a stick.

I am certain that a good agricultural extension service should be completely divorced from all regulatory work, regardless of what efficiency experts may say to the contrary. Time and time again, in country after country, I have seen farmers' stay away in droves from agricultural advisers because the advisers were also policemen or "government knows best" men. They had lost, or had never gained, the confidence of the farmers they were supposed to help.

I am certain that in America, county agents should stay on the opposite side of the block from the Production and Marketing Administration office, whose duty it is to enforce government regulations. That may be pretty important to watch out for in the years ahead.

One isn't very apt to ask advice this week from a man who next week will be out checking up on

36 Extension Should Not Carry a Club

the number of acres you have in wheat or corn, or whether you have marketed all your pigs.

Even in highly democratic England where extension and controls are combined in the same office, it is a very doubtful marriage, although the British through years of training have become much more regulation minded than we.

The future effectiveness of our own extension service depends upon our keeping it an independent, educational organization that works with — and I would like to repeat that word, with — farmers and farm leaders.

Agricultural Monopolies

AN AGRICULTURAL MONOPOLY — that's virtually what farmers have in some parts of Europe. Perhaps we should call it a *public utility*. The program works very much like the franchise that American power and telephone companies have. Let me tell you about one.

Under special laws enacted by the Norwegian parliament, the farmers' milk cooperatives control all the milk in the country. Nearly all the milk in Norway is bought by these cooperatives. Even if you sell your milk to your next door neighbor, you still must pay the cooperative charge. The farmers' organizations are the only ones who own dairies.

In Oslo, the capital and largest city of Norway, I visited the modern dairy plant. It is the only dairy in Oslo. Since the farmers' cooperative is the sole milk distributor in Norway, there is only one dairy in each town. It would be illegal for anyone to start a dairy in competition, just as another telephone company could not build a telephone line into a city already serviced by a company.

Who sets the price of milk? Each year the Department of Agriculture puts out a price for milk. The cooperative can charge less than the government price, but not more. Again, you see, it works very much like American electricity or telephone service.

We have a somewhat similar setup here in the market agreements sponsored by the government. Under these market agreements milk companies negotiate with the farmers' organization for a set price for the milk. These market agreements apply to many of our major milk producing areas.

Up in the mountains and along the rugged fjords I stopped to visit farmers who milked only a few cows. Their milk is made into cheese or butter because they are far from any large cities. They get, however, about the same price for their milk as the dairymen I visited down near the bigger cities.

By law the cooperatives are required to pay the same basic price to everyone, regardless of whether the milk goes into bottles or into cheese and butter, whether it goes to the big cities or to the small towns. There is some justice to this. It costs just about as much to produce milk up in the mountains as it does down near the cities.

It works something like the *blended* price for milk in America — except our price applies only to a certain milkshed area and not to the whole country.

The program was first set up during the depression when milk prices in Norway, as in America, were very low and many dairymen were going out of business. Prices fell drastically as dairies slashed their prices in an attempt to get rid of the milk. Farmers near Oslo were able to get most for milk. Farms in the mountain valleys were sold at sheriff's sales for taxes — for their milk went to cheese and butter factories where prices were even lower.

To help the farmers, the government set up the semi-official farmer-run market board. Today, under the program, farmers belong to eight different milk pools. These pools collect the milk and run the dairies in the nearby towns and villages. They distribute milk from the dairy to the retail stores in the larger cities. The pools, in turn, are controlled by the over-all market board.

Very few dairy products have been exported since the war. But exports, too, are controlled by the farmers' cooperatives.

Most farmers and farm leaders like the *public utility* farmer-owned distribution system. Denmark had a similar one during the war. The organization was set up primarily to sell the large volume of export food, Danish bacon, eggs, butter, and cheese. So the price to the farmers had to follow the export price. It is difficult to set up a long-time program to meet export needs.

In Norway, on the other hand, the market is

all within the country and the price bears no relation to world prices. Long-time plans can be made and the market price rigidly controlled.

The Market Board — Pro and Con

Let us look at some of the good points of the market board. The milk marketing organization can keep the price of milk at a reasonable level. The farmer is never forced to sell his milk for less than it cost him to produce it. The government sets the maximum price. The cooperative cannot overcharge the city housewife. Then, too, it levels out the sharp peaks and slumps in prices that may come during the year.

If there is temporarily more milk than the housewife wants, the surplus can be made into butter and cheese. Milk prices will not plummet because of a temporary surplus. If one community does not have enough milk, the cooperative can frequently bring in milk from another community. Norwegian farmers have had better prices for their milk since the program started.

The market board has government sanction, but it is run by the farmers themselves through their cooperative. Planning, buying, and selling are all done by these cooperatives. This, I think, is good.

Now let us look at the other side of the picture. Here in America we like competition. We think competition stimulates better service and

technical improvement. Does the housewife lose out in the milk monopoly?

One of the cooperative dairy managers put it this way. "Most people will tell you the present marketing system is very good. It has worked well. But I think in larger cities it would be better if there were competing dairies." I agree with him.

In Oslo I asked the dairy manager if he sold homogenized milk. He said, "No, we have no requests for it."

"But have you ever given the housewife homogenized milk?" I asked him.

"No, we have not, because they have not asked for it."

"But how will they know what homogenized milk is if you don't offer it to them?" And he had no answer to that question.

I feel quite certain that if there were two or three dairies bidding for business, the housewife would get homogenized milk. At least one dairy would put in a homogenizing plant to see if he could sell more than his competitor.

Now I realize that perhaps it isn't so important whether or not the city housewife gets homogenized milk. But I do think it points to the lack of initiative that monopolies develop. No doubt the attractive throw-away cartons and advertising campaigns stimulated by dairy companies in competition have increased the consumption of milk and dairy products here in America.

One of our big headaches in America is over-production. I asked the officials of the cooperative, "How long could you handle more milk than the people drink?"

They said, "Perhaps a year. The monopoly is not the answer to real milk surpluses."

In the Norwegian fish industry, when surpluses pile up, the fish market board establishes quotas that are enforced by the market board. So far farmers have never been given a milk quota.

The milk monopoly has made money for the farmer because it improved the distribution of milk and made cheese or butter when whole-milk prices were sagging. It has helped the farmers far from the cities by spreading the milk prices and improving transportation of milk. It could not take care of milk surpluses of dairy products for a long time. While in Norway this is not an important problem, in America at times this is one of our big headaches.

The great disadvantage of the milk monopoly, I think, is the continual negotiating with the government over the price it sets for milk, and the lack of stimulating competition that brings with it improvement in service and cheaper production methods.

I would not like to see in this country complete milk monopolies based on the Norwegian plan. I think we have accomplished many of the same benefits by our marketing agreements and blended

prices. Their program does point out, however, that farmers' cooperatives can successfully invade the fields of distribution when companies fail to deliver milk at reasonable prices to the housewife.

Britain's Guaranteed Farm Prosperity

EVERY MORNING AT SEVEN O'CLOCK the Red Poll cows crowd through the gate and plod up the path half-hidden under ancient oak trees. A few minutes past seven, the clatter of stanchions and the bang of milk cans announce that it is milking time in the red brick barn at the Tim Fischer farm. Tim Fischer and his cousin farm 300 acres in the shire of Kent in southeastern England. The farm was once part of a large estate that spread out across the rolling, wooded knolls surrounding a huge manor-house, now used as a girls' school.

Tim Fischer, like all British farmers, knows the price he will get for his milk when it is picked up every morning. He has known the price ever since February when prices were published for the next twelve months. Tim Fischer sells his milk under contract between the government and the British farmers for a guaranteed price. Likewise, last spring before planting time, he knew the price this fall at harvest for his grain and potatoes.

His wife can tell you what she will get for her eggs next week, next fall, and winter, too, for that matter. With a quick glance at the schedule of prices, Fischer can tell you the minimum price two years hence for his calves, the minimum price for his hogs a year from this fall. He may get more, but he knows he will not get less. If his costs go up, that will be taken into consideration.

In Britain not only does the government guarantee the price of various farm products that make up two-thirds of the farmers' income, but it assures the farmers a market at this price. On these basic crops, the government is the only legal buyer.

This all started during the war. Just as in the United States, Great Britain, in the 30's, enacted several agricultural marketing laws in an effort to get a floundering agriculture back on its feet. It was not until the beginning of the war that agricultural prices and production, along with the rest of British economy, became completely planned.

Encouraged by good prices and patriotic appeal, and perhaps slightly prodded by compulsory acreage quotas, the British farmers plowed up their permanent pastures, reduced their livestock, and increased the British home-produced food by 50 per cent.

To keep down inflation caused by workers demanding more money because of an increased cost of living, food prices in the stores were fixed with little thought to the prices paid to farmers. The differences came from the taxpayers as subsi-

dies. The government stepped into the market and bought directly from the farmer the entire production of grains, meat, eggs, milk, potatoes, and sugar beets.

At the end of the war, this policy became a permanent fixture in British agriculture when it was written into the Agricultural Act of 1947.

Today's British agricultural policy boils down to four chief points: (1) guaranteed prices and an assured market, (2) security to tenants (it is almost impossible for a landlord to make a tenant move so long as he does even a reasonably good job of farming), (3) cheap food to the housewife by a maze of subsidies from public funds, and (4) direct government payment for certain types of marginal farmers, such as the small *croft* farmers on the bleak Scottish highlands.

Let us see just how this program works to give Tim Fischer and the 400,000 other British farmers guaranteed prices and an assured market for most of their products.

In February, the British Ministry of Agriculture held a price review to establish prices for the coming year. Government officials sat down on one side of the table. The Farmers' Union, whose membership makes up the bulk of the farmers like Tim Fischer, sat on the other side.

Before them were stacks of reports such as farm account books to determine farm costs, the financial position of various types and kinds of farms, comparisons of farm income to that of people work-

ing in the factories and to other kinds of business, prices of the things farmers must buy, farm labor wages, and the like.

The farmers' organization then negotiated for a total national income for farmers. Last year British farmers made a little more than a billion dollars by the old rate of exchange, or about 3 per cent of the total national income. This year, because of higher production *targets*, farmers will make more. They will have more acres in crops and will produce more milk.

Once the total income is agreed upon, it is then broken down in prices for various crops. But, you may ask, what if they can't agree? Under the law, the government must consult farm representatives. It is not demanded that they agree. The final prices rest entirely with the government. And, too, the government can increase the price to encourage farmers to grow certain crops that they feel are necessary for reasons such as national defense or to cut down imports.

Sounds fine, doesn't it? With established prices, the farmer doesn't have to worry about marketing time or sliding prices. He can devote all of his time to planning and producing farm crops. The program has the wholehearted support of the Farmers' Union and all major political parties. Most farmers like it.

In order to judge the plan of forward price fixing in Britain, you must understand something about British agriculture. The entire United

Kingdom — which includes England, Scotland, Wales, and Northern Ireland — has only some 60 million acres, about the size of Wisconsin and Illinois together. No farmer in the United Kingdom need drive more than 100 miles to get to the ocean. Of the United Kingdom's 48 million people, only about 6 per cent are farmers. About 16 per cent of the people in America are farmers.

Because of the limited land area, only some 17 million acres being in cropland, the farmers never produce enough food for the island's people. Even today, with an intense drive to increase food production, about 60 per cent of the food comes from abroad. With the possible exception of milk and potatoes, the British farmer is never faced with the price-devastating surpluses that plague our own farmers. Even with dairy products, large quantities of cheese and butter each year come from Holland and Denmark.

Prices in Great Britain could be maintained on most agricultural products merely by regulating the amount of imports.

You must remember that Great Britain has a completely and rigidly controlled economy. I couldn't even get six rolls of colored film that had been sent to me until I had an import license. The farm program is only part of that plan.

Pricing System

Against this backdrop, let us look closely at the British price system. So far, it has operated only

during periods of crisis. The dollar shortage has pretty well dictated the order of importance of products. No one could argue that more meat or high protein livestock feeds were not needed. The fact that these products could be bought cheaper on the world market than they can be produced in Great Britain means little so long as Great Britain does not have the money to buy them or needs to spend her money for something else she cannot produce at home.

So Britain has paid rather dearly for home-produced meat. In time Britain should have the exchange to buy more goods on the world market. Even now milk supplies have caught up with the demand. Priorities for crop production will soon be more difficult to determine. It may be hard to figure how much above world prices British farmers should get.

Let us look at wheat. To get more wheat, higher prices keep less adapted land for wheat in wheat production. If prices come down, many less adapted wheat farms could no longer produce wheat profitably. Home-grown wheat supplies would go down. Then the argument could always be used that wheat is a basic crop, national security demands large local production, wheat fits well into the rotation, and so on.

In the end, the price of wheat might very well depend upon the ability of the Farmers' Union to argue the case on non-economic grounds. This has actually happened in the case of sugar beets.

During the first world war, to get additional sugar the government introduced sugar beets, built sugar beet factories, and gave generous subsidies to sugar beet growers. It was all to be a wartime measure. With peace and world trade restored, Britain could return to buying cheaper sugar abroad. Peace came, world trade was restored, but sugar beet subsidies went on.

Today, Britain could grow sugar cane in her own colonies, and import the sugar much cheaper than she grows it at home. But you should hear the long array of arguments built up for home sugar production. First, there is the rather effective argument that such an industry would be vitally needed in the event of war. There is the argument that sugar beets fit well into the rotation, that processing factories are already built, and so on.

What effect will a cost plus price for agricultural products have on efficiency? One could hardly expect it to increase efficiency. Of course, the government could force increased efficiency if it took the bull by the horns, and gradually reduced prices. However, it would have to be over the screams of many farmers that the government was trying to put them out of business. That would take a good deal of political courage.

The British farmer has done very well under guaranteed prices. During the war boom years, he might have gotten more for his agricultural products on a freer market, but even we had ceil-



Fig. 3—This happy Italian farmer lives in southern Italy. Like others of his kind, he faces the problem of too many farmers on too few acres (Chap. 2).



Fig. 4—Farmer Dimitri Boniakos grows rice on once-barren salt flats which have been reclaimed by an American-type extension service operation (Chap. 4).

ings then to hold down inflation. At present, on a freer market, he would get perhaps about the same for grains, considerably less for livestock, eggs, and milk, based on present world prices.

Before the war, the British farmer received only 1.3 per cent of the national income. At present he receives about 2.8 per cent, and in future years he may get even more. Before the war, the average income per farm in Britain was \$640. It is now a little more than \$3,000. So you see, he has done pretty well. Some folks say "too well," for he has worked on what is essentially a cost plus contract for his products.

Cost of Subsidies

To me, the most dangerous part of the whole program is the necessary subsidies required to operate it. In order to keep the price of food down, the government establishes prices in the grocery store at a low level. The loss comes from the public till as subsidies.

As costs increased after the war, the amount of money needed for food subsidies skyrocketed until, in 1949, the British government spent \$2 billion at the old exchange rate then in effect on its cheap food program. If we had such a subsidy here in America at the same rate per person, it would cost us around \$6 billion a year.

In 1949, the British government spent nearly \$200 million in subsidies for home-produced beef alone. This doesn't include \$128 million sub-

sidy for imported feeding stuff to help keep the feed cost down for the British farmer. Who pays for this? Everybody in England who pays taxes, and that includes just everybody.

In Britain in 1948, 42 per cent of the national income went for taxes. So you see, cheap food for all but the very low income families is just a pipe dream.

To me, it seemed a plain admission that people aren't getting enough wages if they don't have enough money to pay what it costs to produce food. But cheap food is a popular campaign theme. The British people told me that any political party that didn't go along was doomed to failure.

Many British taxpayers look with scorn on these giant subsidies. When I was in Great Britain, a member of parliament, Stanley Evans, an assistant in the Ministry of Food, was fired because he said, "No other nation featherbeds its agriculture like Britain."

The government quickly came to the defense of the farmer. Headlines in the newspapers like, "Farmers have sacksful of notes, MP's are told," did not help the farmers' cause and had wide appeal among the housewives who were trying to make their husbands' weekly paychecks go as far as possible. So, while Mr. Evans may have been irrational in his arguments, many far more conservative British city people are beginning to wonder just the same thing.

The farmer is justified in pointing out that the subsidies are food subsidies to hold down the cost of food to the consumer. But as world prices went down before the Korean war, more and more of the subsidies became farmer subsidies and less and less consumer subsidies. There is no doubt that the total food subsidy check in Britain rose to enormous levels.

Let us take the case of milk, the most heavily subsidized product in Great Britain. With cheap milk and school milk programs, the consumption of whole milk has gone up. Dairy farmers have built new barns and expanded their herds to meet this increased demand. These programs are costing the taxpayers \$300 million a year.

Now dairy farmers have about caught up with the increased demand. Should some of the subsidies be taken off, the dairy farmer feels that consumption would go down and that he would be left with heavy investment in barns and cattle that he made to meet the government's plea for more milk.

So the dairy industry may have to put on a campaign to increase even further the consumption of milk. But the more milk the British drink, the more it costs the government.

The Ministry of Agriculture has a way out. Under the present regulations, it can guarantee prices only on a portion of a crop. So far the demand has been for more food and this regulation has not been imposed. It could be at any time,

however, if the government ever runs into real trouble with surplus. Since British farmers produce only 40 per cent of the food eaten, surpluses are generally no real problem except possibly milk and potatoes.

Cheap food has a strong political appeal, but it merely takes the same amount away in taxes with a substantial sum off to maintain a huge government staff of people. In the end, the price the farmer receives may well depend upon the ability of the Farmers' Union to bargain for the farmers.

The farmer has one big argument. Every pound of beef he produces, every bushel of grain, means that one less pound of beef and one less bushel of grain has to be brought by ship from far away Australia or the Argentine. That's pretty important if war should come and submarines start prowling again.

So far, times have been good in Britain and nearly everybody has had a job. But I seriously doubt, even in Britain with its rigidly controlled economy, that the workers, who outnumber the farmers more than ten to one, would allow the farmers to live in prosperity when they themselves were out of work like in the 30's. That, of course, is the time when farmers really need help.

Said one British farm economist, "During the 20's and 30's, the pendulum swung way over and the farmer lost out; now it has definitely swung over to the farmer's side. He will do pretty well if he can keep it there."

At the best, the British farmer from now on out is in the midst of politics right up to the top of every pail of milk and every bushel of wheat. His very living depends upon the continued existence of a friendly parliament.

CHAPTER 7

No Place for Political Neutrality

FOR SEVERAL DAYS I visited a German farmer near a little crossroads town in southern Germany. His 250 acre farm sits fairly close to the border between the eastern and western zones. He and his family were against the Hitler regime. Most of the family wound up in Nazi concentration camps.

An agricultural leader in his section of Germany, this farmer has worked closely with the new German government and the American occupational advisers. He has done much to help get German agriculture back on its feet.

But he told me that should the Russian army start moving tonight, he and his family must also start moving tonight. He has been entirely too prominent and too friendly with the American advisers.

"We lived through such dark days once, not knowing from one day to the next what would happen. My family and I don't want to live through it again," he said.

I think he is to be highly admired. The future of democracy in Germany depends upon such

courage among Germans in all occupations and in all classes — courage to do what is right when you know your actions place you high on a list of undesirables of an enemy parading only a few miles from you.

Farmer committees in each village in Germany, elected by the farmers themselves, now help lay out agriculture extension programs for their own committees. A far cry from the old days when extension was directives handed down from the head office right out to the farmer. Committee systems are part of the present plan to help build democracy on German farms. It is not always easy. Frequently committees are inert. Farmers sometimes fail to take an interest, many even skip important meetings.

For you see, many German farmers do not want to become too active or sympathetic toward any government activities. Without a public spirit tradition, many a German farmer prefers to be completely neutral toward any government program — perhaps justly so. He has learned through long years of experience that in Germany the neutrals have survived. In the lifetime of many a German he has seen those who collaborated with the Kaiser's government disposed of, those sympathetic to the between-wars republic sent to Nazi concentration camps, and the Nazis themselves in turn stripped of their power.

An extreme example is that of a German farmer near the Russian zone. When there are official

papers to be signed, he always asks, "What will happen when the Russians take over and find this paper? I don't think I'll sign it." It will take time to tear down this neutrality, greater time perhaps to build democratic traditions — a task not easily done in the present East-West cold war.

I heard of a German lady who lives in Berlin. She lives in the British zone. She works in the Russian zone. But her sympathies lie with the western powers. Several times the Russian officials have demanded that she move over into the Russian zone. She has always come back with the reply that if the officials would find her an apartment in the Russian zone of Berlin, she will move. She banks on the severe housing shortage to prevent them from finding her an apartment. Actually she is frightened to death that they will find one.

Then why doesn't she work in the western zone, you ask? Her reasoning is something like this. "Suppose the Allies eventually win out in Berlin. They won't hold it against me that I work for the Russians. But suppose the Russians win in the struggle for Berlin. The records will show that I work for them. And it might be very dangerous to have worked for the British or Americans if the Russians take over."

I think down through the years this political neutrality among the citizens of Germany laid the groundwork for the rise of Hitler to power.

Fortunately, we in America do not have an army of a foreign country massed at our back door. We

do not live in daily terror of personal retaliation against ourselves and our families.

Now I realize that this may all seem a little far-fetched in a country where folks like to argue politics as well as we Americans do. I might add that I found the same enjoyment for political arguments in most of free Europe — whether it was in a street cafe, over miniature cups of Turkish coffee, in Greece, in the parks of Paris, or around the firesides of Denmark.

But I would like to point out a growing tendency on the part of all of us inside and outside of agriculture to "let government do it."

Let government make the decisions. Don't bother us with the problems. It seems that government generally is always more than willing to take over.

If farm programs, government or non-government, are to have any success, they must have the full-hearted support of farm people, and in a democratic country, the full support of all the people. What I think is equally important, they must be operated by farmers themselves.

Today, with government entering into our daily lives more and more, it is becoming increasingly important for farm people to take an active interest and an active part in government decisions. We cannot afford to shrug our shoulders and say, "Leave it up to the boys down in Washington." Farmers cannot afford to be politically neutral.

CHAPTER 8

Europe's Socialism Is Not for Us

WHEN I SAILED FROM NORWAY, our ship put in at Bergen at four o'clock one afternoon. It was loaded down with American tourists. Nearly everybody aboard ship had just remembered that he had promised Uncle John or Aunt Hannah a present and in the rush he had forgotten to get it. People streamed off the ship to make their last purchases before leaving Europe, but all the stores were closed.

Yet Norway needed those American dollars badly. .

Why were all the stores closed at four o'clock? Because that's the time the government says stores must close. The stores might have been able to hold open late had they gotten a special permit from the police. Then they would have needed a permit from the labor department to work their people overtime. It is highly doubtful if the people would have worked overtime anyway.

The clerks would have told you something like this, "Why should I work overtime? The government would just take more of my pay in taxes."

A man making \$2,500 in Norway, a very good

wage there, must pay nearly \$1,000 income tax. Fifty-nine per cent of Norway's national income goes for taxes.

"Anyways, what can I do with my money?" the clerks would say. "Surely, I can always use more money, but I can't buy an automobile or many of the other things I would like to have. The prices are just completely out of reach. Then, I probably could not get the permits. There aren't many consumer goods available that I particularly want. Really the only luxury that I can afford is time off. The government can't tax that."

It isn't that the Norwegian worker would not rather have an automobile, a refrigerator, or other semi-luxury goods. He would. The fact is that frequently he just can't purchase them legally even if he has the money.

The shopkeeper would have told you, "I am getting along pretty well, selling all the goods I can get hold of. And anyway I can only make 5 per cent profit. That's the law."

Norway, sitting as it does next to the Russian border, can ill afford to have anything but growing industries. Wouldn't it be better if she speeded up production and then found more time for vacations by labor-saving machinery, even though for a time it might mean that the people must put in longer hours and more overtime?

The Norwegian workman has one of the most liberal vacation systems in the world. He just doesn't see any sense in working overtime. There

are no incentives, so he takes time off. Yet, for the good of the country as a whole, it is the one national luxury Norway cannot afford just now.

What Happened in Britain

Let me tell you what happened in Britain.

All prices were established and wages fixed during the first part of the war, at about 1939 levels. Those were the early days of the war. British troops were being pushed off the French coast at Dunkerque. Prowling packs of submarines were sinking British supply ships. One could hardly argue that Britain did not need controls then.

The war was won; controls stayed on.

Let's see just how these controls work. Allan Bridger works in a steel mill in Wales. His wage is "stabilized" according to the cost of living index. His wife goes down to her grocer and buys their food at what the government figures she can afford to pay.

Nearby, the government buys Farmer Fraser's wheat and milk at a cost plus price. This is more than the government figures the housewife can afford to pay, so the government pays the difference.

Both Steel Worker Bridger and Farmer Fraser are part of the government and their taxes are not a part of the cost of living index.

Bridger is in the 80 per cent of Britain's population that made less than \$2,000 before the British pound was devaluated. The government pays him

a subsidy for two of his three children. Altogether he gets about eight dollars a week in welfare benefits from the government in the form of subsidies, cheaper food, and medical care. This costs him about \$9.50 a week in taxes.

Businessman Smith has a drug store on the corner in the village. He doesn't have to worry about someone putting a drug store on the opposite corner. To start a new business, the other fellow would have to have a permit. So long as Smith is on this corner, the other fellow would have a pretty hard time getting a permit.

With little competition, small wonder that druggist Smith carries few lines of merchandise and his customers wait in line to be served.

The operator of a moderately sized filling station in Scotland told me he kept one person busy merely filling out forms, checking rations and dealing with government control officers. The government has set up bureaus which check and countercheck permits and rations. Taxpayers Bridger and Fraser find more and more of their tax money going to support a growing staff of government employees.

What is equally bad, when they buy a gallon of gasoline, a suit of clothes, or a pair of shoes, the manufacturer and retail store have added to their cost of doing business the salaries of almost an equal number of people who do nothing but negotiate with the people in the government.

Socialism supplies its own opiate. Actually

Steel Worker Bridger is afraid to see controls lifted. He might have to put in a full day's work for a full day's pay. Farmer Fraser doesn't want the government to step out of agriculture. It would mean that he would have to become more efficient and stop farming on a cost plus basis. Businessman Smith without his permits to limit competition would find that he would have to get down and dig to sell. He shudders at the thought.

In the end everyone suffers, for there are fewer bushels of wheat and less meat, fewer suits of new clothes, fewer new schools. Not only that, but they cost more to produce.

You probably own a reasonably good automobile, if not a new one. Your wife has a good gas or electric range and a modern refrigerator. She may even have a new fur coat.

In socialist countries like Britain, only the very well-off people can afford these things. These are all luxury items and when they plunk down the cash for them, if they can get the permit to buy them, they find that a large proportion of the price goes for taxes. That's why they have to pay nearly twice as much for an automobile as you do. That's why cigarettes sell for 45 cents a pack, gasoline for 50 to 90 cents a gallon.

Politics and Economics

Let us look in on a government employee in one of the British control offices. Buffington con-

trols certain imports coming into Britain. It is his business to okay them or turn them down. In a sense he is both a promoter of the economy by bringing in things Britain needs and also a controller of the economy since he keeps out the things that the government thinks Britain doesn't need.

Every day Buffington is confronted with people who want to pull some "shenanigan" to get around the rules and regulations. As a policeman, it is Buffington's job to see that they don't get the permits.

Now it is a good deal easier for Buffington to become more police-minded than promotion-minded. His personal income is not set or even influenced by how much his department stimulates business. A businessman with a good idea may find it cooled off in a hurry by Buffington's "Come back tomorrow," or "You will have to see Mr. So-and-So."

The thousands of Buffingtons who make up the government have had at least 10 years of training on plugging the loopholes. If their programs don't work, they merely put in more regulations.

In Britain, following the war, the government took over the coal mines and the railroads. More lately, they have "nationalized" the steel mills. That's why Steel Worker Bridger is now a government employee.

You see, in most European socialistic countries the government runs the coal mines, the power companies, the railroads, the bus companies, along

with most public utilities. They run them just as we do our post-office system here. Like our own post office, most of the government services have their hand deep in the taxpayers' till.

It frequently is easier to subsidize these industries than put in efficient methods that will make them pay. They become huge bureaucracies run by government.

These companies once paid taxes, but now owned by the government, they no longer pay taxes. At the same time, the taxpayer must pay off the people who formerly owned the mines, railroads, and steel mills.

In America we have the Sherman anti-trust laws that set limitations on big companies and have power to break up monopolies. The Sherman anti-trust laws are backed up by a long list of Supreme Court rulings on what does and does not make a monopoly.

In Britain if a steel company gets so big that it can set the prices and charge people too much for steel, government doesn't break it up. Instead, government leaders cry, "nationalize it." So the "evil" private monopoly becomes a sanctified government monopoly.

The inefficiency and price padding that went on in the privately owned monopoly has added to it the additional inefficiency and labor padding of a government bureau.

The English housewife may find rocks in her coal. She may not like it, but she still must buy government coal for the government has taken

over all of the coal mines. Her only recourse is to go hunt up her member of Parliament and complain to him.

The European socialist party member can give long reasons why their planned economy is far better than a haphazard free economy. More frequently than not, the economy is not planned on hard, cold economics — it is just plain politics. Some formula adopted on the spur of the moment has become a religion. Government is afraid to change it.

A few years ago, the British government, faced with a severe oil and fat shortage, inaugurated the *groundnut scheme*. Land was cleared in South Africa and put in groundnuts — peanuts to us. Large amounts of money were spent, expensive equipment purchased, but few peanuts were produced.

The failure has been widely published in the British press, and by every street corner politician. You can rest assured that the British government will think twice before it inaugurates another such program. It all boils down to this. When the government directs the flow of capital, it generally frowns upon adventurous capital. It would rather invest in a "sure thing," and not face the political suicide of a business failure.

Socialism Stifles Opportunity

Corralled by public opinion, government finds that its adventurous capital is limited. The success of America has depended upon people who were

willing to take a chance. The Henry Fords and Thomas Edisons had an idea and were willing to bet money on it. Many of them did not succeed. Some did. But in betting their money on their ideas, they pushed back the frontier of economic development of our country.

A labor leader in Britain argued with me that it wasn't important that British families have refrigerators. The summers are cool and they don't need to keep their food under refrigeration, he told me. He went on to say that it wasn't important that they have automobiles. In Britain distances are short and there is an excellent bus service that will take you to any part of the country.

Perhaps there are few more useless luxuries than a fur coat. But how many families have worked overtime producing more for all of us so that the wife could have that new fur coat? How many families have worked longer hours to pay for that shiny new automobile that they actually could have gotten along without?

During wartime, people will put in long hours to be patriotic. In peacetime, the thread of patriotism wears a little thin.

An act of the British Parliament cannot make more eggs, more meat, more milk, or more houses for its people. There are so many bushels of wheat, so many cattle, so much lumber in the country. Parliaments may divide these as they see fit. But this doesn't create more. The only way the British

and the Norwegian housewife can have more meat or more milk is through productive work. They can only have more by producing more of them or by producing things to exchange for them.

The maximum of security depends upon a dynamic economy to produce more and more things. These countries can guarantee security to their people only to the extent of their total production. If they merely divide what they have, no one will have very much. In the end the road to abundance lies in greater production.

Nor will controls, regulations, price ceilings, and rationing cure inflation in these countries. With production stifled, these at best are but dams that must be built higher and higher to hold back a mounting flood of excess money.

Bad practices by business, labor, and agriculture can make the time ripe for socialism. Even the conservatives of Britain or Norway would admit that decadent capitalism in their countries paved the road for economic planners. Too often huge monopolies had been built up. Big businessmen too frequently mapped out territories and then by gentleman's agreement kept in their own bailiwicks. Labor did the same by slowdown techniques and padded jobs. Agriculture demanded special government protection. This is a lesson we should remember in America.

The greatest argument against socialism is an active industry, highly competitive, that brings more good things to more people.

In my travels from country to country, I ran into large numbers of young people who wanted to come to America. When I asked them why, they would answer, "There is opportunity there." I never heard anyone say he wanted to go to Great Britain or Norway because, "There is security there."

You see, though clothed in the garb of liberalism, the socialist is actually a conservative at heart. He is afraid of the future. He fears a dynamic, expanding economy. For such an economy involves risk. He is afraid of risks. He will settle for freezing the present pattern of things, and he buys the security of today with the opportunity of tomorrow.

Many Europeans are beginning to realize that socialism is an aspirin economy. For a time it makes the country's faltering economy feel better. What at first seemed to be a stabilization of the economy soon turned out to be the first symptoms of rigor mortis. Business continued to lie in bed, afraid to exercise its weakened muscles, taking larger and larger doses of economic aspirin.

Who Should Own the Land?

LET'S SEE how some other countries have handled the problem of, "Who should own the land."

A stormy Italian parliament has argued over a bill to distribute large land holdings among small tenants who now farm the land. Long promised land redistribution is now on its way. The communists have made political hay of the delay.

In politically restless Italy, the parties in power generally move to appease the clamoring crowd. Today the Italian peasant definitely wants land of his own.

Living in cramped stone houses and tending with great labor their tiny patches of rented land, the peasant farmers eye with envy the large landowner living in comfort in the city from rent collected on his large holdings. About one-third of the land in Italy is in 500 acre tracts. It is owned by only 5 per cent of the landowners. Many of these large holdings are farmed poorly. A peasant farmer in the south told me, "I could not buy land even if I had the money. The big landowners just won't sell."

Even the Italians agree that the extremely poor standards of living of the Italian peasant cannot long be tolerated if the country is to have political stability.

Except for some of the rich, highly developed areas, the peasants live poorest where the land is owned by a few large landowners. Says one American agricultural expert in Italy, "The tenants or hired workers have had no incentive . . . and owners have been unable or unwilling to invest the amounts necessary to develop their own holdings."

Promises of land for land-hungry tenant farmers are nothing new in Italy. In medieval days, most of the land was owned by feudal lords and the church. Today all over Italy clusters of 14th century villages are perched on the top of steep hills, on inaccessible slopes of the mountains or surrounded by strong walls, reminders of the days when every noble was ruler of his own little domain. As early as the 11th century, in northern and central Italy, some of the tenants threw off the yoke of the feudal lords. For the most part, particularly in the south, the large landowners held their vast holdings until the latter half of the 18th century. By the middle of the 19th century, the various separate kingdoms and states that now make up Italy attempted to break up the large holdings.

Proclaimed with a blare of publicity, the fascist government brought forth its version of land reclamation and land improvement, the *bonifica*.

These were largely land reclamation projects, frequently limited because of their high cost, and did little about the large land holdings on which tenants lived on meager incomes. In the south, some farmers pointed out to me with pride, "the fine irrigation and drainage systems Mussolini built."

The present government plan calls for breaking up large estates of over 750 acres in the south where the largest amount of undeveloped land is located. From this land will be developed 5,000 small holdings. Completely exempt is the over one million acres owned by the church and religious orders, nearly 700 thousand acres owned by welfare agencies, and over two million acres owned by other organizations. Needless to say, much of this land is not always managed or farmed as well as possible. State and government land will be taken over and distributed.

Who Should Own Land

Who should own the land? All over the world this same problem faces farmers and farm people. In some countries political campaigns have been won, revolutions built on this very subject.

Large holdings have plagued Europe for ages. This is in sharp contrast to the experiences of our grandfathers who put their wives, their children, and a few possessions in the back of a covered wagon and headed west to preempt 80 acres from the government.

American agriculture too has wrestled with the problem of absentee land ownership. Frequently the owners, living far from the land, know little about farming. Under pressure to get as much out of it as quickly as possible, tenants have had to mine the land with little thought of future productivity. On sloping farms, tons of soil have washed down into the creek as the cash tenant kept the acres under the plow.

This has led some people to say all farms should be owned by the farmers who farm them. Some farm leaders have pointed out that these tenant-operated farms, farmed properly, are actually stepping stones to farm ownership. Young farmers not having enough cash to buy a farm outright can farm on someone else's farm, and eventually save enough to buy their own farms.

Security of Tenure

Britain's solution has been quite different. The British agricultural holding act now gives the British tenant almost complete security of tenure. It says, in brief, landowners who rent their farms may keep their land, but the tenant will have nearly all the say on how the farm will be run.

The farmer then becomes almost like the officer of a corporation. He runs the business and has most of the say. The owner is more like a stockholder. With such security, most tenants don't want to own their own farms. They would rather invest their capital in more machinery and more livestock instead of having it tied up in land.

In Britain, county committees have the legal right to force the landowner to make necessary improvements and the tenant to do a reasonably good job of farming.

Sweden requires that anyone buying a farm must plan to live on it and operate it himself. Nor can a farmer who owns one farm buy another unless his own farm is too small for profitable operation. If there is no farm operator to buy the land, the government can come in and buy the farm.

In Norway the price of a farm, like the price of everything else, is set by government appraisers. A county board system decides who gets the farm. They generally give preference to those who will live on the farm and farm it themselves. With county committees and government in control, it is frequently impossible to buy a farm in these countries.

Small farms are a problem in some sections of America just as in parts of Europe.

Laws in Great Britain, Sweden, Denmark, and Norway give loans and even direct subsidies to small farmers to encourage them to increase the size of their farm holdings. In America such loans were available during the depression, and at present FHA loans are available to small farmers. We do not have, however, a separate government farm program for small farmers such as they have in parts of Europe.

One of the problems that faces young farmers in America is the high cost of land. Unless the

young farmer inherits his land, he may find it difficult to get enough cash to make a down payment. Even then, the yearly payments may be pretty high.

Most farm mortgages in this country must be paid off in 30 years. That's all right in times like these, but in times of low income it puts a terrific stress on the farm and farm families.

Scandinavia has overcome this somewhat by long time, low rate mortgages. In Norway a farm mortgage is paid off in 54 years. In addition, a farmer can get a 30-year second mortgage. By using both kinds of mortgage it is possible for him to take up to 80 years to pay for his farm.

This means that the farmer owns his own farm, but that he is able to buy it and operate it with a minimum amount of capital investment for land over any short period of time. The loans are financed by government and farm cooperatives.

I think that the Scandinavian type of mortgage, financed by farm cooperatives, could be a big help to young farmers. It would save the farmer who has the misfortune of starting his farm operation in times of falling farm prices. It could help him over the lean years when farm income goes down. It would leave a larger part of his income to buy machinery and livestock, build needed buildings, and make repairs on the farm.

Nationalized Land

DAGANIA IS A KIBBUTZ, a communal farm, located on the banks of the Sea of Galilee in Israel. The Jordan River flows through its fields. The oldest kibbutz in Israel, it was established by Jewish immigrants to Palestine nearly forty years ago.

I lived at Daganian for three days. Let me tell you about some of the people I met there.

Sam Shavin is an American, an officer in the American army during the war. He graduated in chemical engineering in South Carolina. His young wife, Gilda, comes from Georgia, and they have two children, a three-year-old boy and a baby girl. Like most immigrants to Israel from English-speaking countries, they are endowed with an ideal. Like all the other families in the kibbutz, they live in a comfortable room. Daganian is one of the few kibbutz where the youngsters live with their parents. They eat in the central dining room with the other people on the farm. During the day Sam works in the orchards and vineyards on the farm. Gilda may serve in the dining room, wash clothes in the community laundry

or darn holes in khaki colored socks. In the kibbutz even the socks are darned communally. Many of the women work on the modern poultry farm taking care of the 11,000 White Leghorn laying hens or helping milk the 260 head of black and white Dutch cows that resemble our own Holsteins. The cows must give 8,000 pounds of milk per year on three times a day milking, or go to market. Each day green feed is hauled to the cattle lots. They do not graze out in the pasture.

Jack Weiss, a young man, was formerly an interior decorator. He lived in England until the beginning of World War II, when he went into the British army. In the early days of the Jewish-Arab war, he went to Palestine to fight in the Israeli army. At the end of the war he stayed on in Israel and eventually went to Daganian. Like all the people of Daganian, he earns no salary. His clothes, meals, room, and even cigarettes are furnished by the kibbutz without charge. Like Sam and Gilda Shavin, he came to Daganian because he wanted to. He stays because he wants to — because of an ideal.

Across the table from me in the dining hall sat a man and his wife. They always ate in silence. Sometimes they sat for a moment staring off into space. They were Polish Jews. Their family was shot by the Germans during the war, their home destroyed. On her arm the woman still carried the dull blue tattooed number from Belsen concentration camp. Unlike the earlier immigrants to

Palestine, they came to escape their past. Unlike the Shavins and Weiss, they did not come because of an ideal — there was no other place to go.

Mother of Daganian is Judith Gilead, the wife of the agricultural teacher and community poet. Judith Gilead and her husband were among the little group of people who left the Ukraine, now a part of Russia, in 1907. They were idealistic, but originally they had no intention of living communally. Her eyes lit up and her face became stern as she told of the early days at Daganian. At first they were day laborers. They saved their money. Even so, no one had enough to start a farm of his own, so they pooled their funds and started Daganian, the first communal farm. Since the women demanded equality in the community, at first they demanded equal jobs and Judith Gilead worked day after day alongside her husband, breaking stones for roads and buildings. There were quarrels within the group and their ideals changed. Said Judith Gilead, "When you see the long tree-lined walks and comfortable houses, don't think it was always like this."

Democracy at Work

The kibbutz is completely democratic. Once a week the members meet for a community business town meeting. Expenditures of more than \$1,200 must be voted upon by the entire body of members, the *asephate*. The governing body or *chav-erim*, a committee of five people elected each year,

runs the affairs of the farm. All the various jobs are broken down into committees of members. A committee meets each night, after each committee member has completed his own day's work, and assigns jobs for the following day. Other committees look after food, take care of the library, arrange adult classes and musical programs, and run the modern kindergarten and schools.

You probably would not want to live in a kibbutz. I wouldn't. Communal life doesn't appeal to many of us. It doesn't appeal to many farmers in Israel. But it has furnished an ideal way of getting immigrants on the land. Agriculture has high priority on the government's development program. At present, 72 per cent of the people live in the three population centers of Jerusalem, Tel Aviv, and Haifa.

Most of the new immigrants come to Israel without money — many of them with only the ragged clothing on their backs. At present there is need to increase food products. Too much foreign exchange goes for daily food instead of badly needed factories and farm equipment. The chief agricultural lending organizations, the Jewish Agency and the Jewish National Fund, semi-official financing organizations left over from the British mandate, must put as many people on the land as possible. The communal farms can absorb large numbers of people with low capital investment. Ein Harod, the largest communal farm or kibbutz in Israel, has about 2,500 people. Even so,

no one is forced to go to a kibbutz, the choice is up to him.

Today many of the immigrants come from eastern Europe. Communal life does not appeal to people fleeing from Russia, and the Jewish tribes coming from Arab-held countries have strong family ties.

Cooperative Farm Communities

The second type of planned farms are the *moshavim* or cooperative farm communities. Typical of the older moshav is the little village of Ramot Hashavim, hidden away among the dark green leaves of orange groves and tall pointed cypress. Here each farmer lives in his own three or four room white stucco house. The family takes care of their individually owned one-half acre poultry farm. In Israel the farms are tiny, the farming intense. This is necessary in a country about the size of the state of Maryland where eventually one and a half million people must live. Like most of the people of southern Europe or the Middle East, the people live in villages. Sometimes located in hostile areas, the villages were easier to protect from the Arabs than individual farms.

Each farmer at Ramot Hashavim has as many chickens as he wants and can care for on his own farm. Because of the grain shortage, the government has limited the number of laying hens owned by one farm to 2,000 birds. According to the original rules of the community, each farm family

must take care of its own farm. There is no absentee ownership here. Originally no one could employ hired labor, but with the large number of immigrants, many of them unemployed, this rule has been relaxed. Even so, most of the farmers do their own work. Everything needed for the poultry farms is bought cooperatively and all the eggs, poultry, and vegetables are sold cooperatively through the "government smiled upon" marketing cooperative, Tnuva, which handles in the neighborhood of 70 per cent of the Jewish agricultural products of the country. In the moshavs and kibbutz it is compulsory to market through Tnuva. Likewise, in the cooperative communities or moshavs, it is compulsory to buy from the community cooperative.

At Ramot Hashavim, the cooperative mill mixes the mash and feed for the 65,000 laying hens in the community. Protein feeds are imported from as far away as New Zealand and Australia. This may explain in part the high cost of eggs to the Israeli housewife — about \$1.20 a dozen. Each day the farmers deliver eggs to the egg grading plant. Here they are sorted, graded, and each egg stamped with the trademark of Tnuva, and taken into Tel Aviv a few miles away.

Ernst Moses, the cooperative supervisor, explained as we walked down sandy roads along the white houses, "Most of the people of Ramot Hashavim came from Germany in 1933. Many of us came from near Berlin. With the little money

we had ourselves and loans from the Jewish agency, we were able to start. Twenty-five of the group were doctors and lawyers in Germany."

Moses himself was a doctor. His red-headed wife interrupted us to tell that the building on the right was the community hall dedicated to Toscanini, the world famous musical conductor. Toscanini visited Ramot Hashavim several years ago on a tour of the country. Because of his interest in the community, the citizens presented him with a tract of land which he gave back to the community as a recreation center.

We turned into one of the farm houses to meet the farmer Adalbert Lechner and his wife, Elsa. They both worked on a poultry farm and both spoke excellent English. Lechner was a businessman near Berlin and was one of the original ten farmers who settled at Ramot Hashavim. His brother is a member of the Metropolitan Opera in New York City.

Even by American standards they would be called good poultrymen. With hens almost piled on top of each other on their limited half acre, they raise their pullets in close confinement. Because of its individual ownership, the cooperative village normally produces more per man than the generally less efficient kibbutz. Nor does it have the possible friction between individuals that may develop in the too close living together of the communal farms. The added incentive of private ownership is lacking on the communal

farms, and even though everyone benefits from increased production it may not be so quickly apparent.

It takes more capital per person to establish the cooperative village, and some farmers may not have the experience or training to operate their own farms. One cooperative community farmer said, "Even the goats give more milk in the cooperative village."

Large tracts of Arab-held land were left behind when the Arabs fled during the war. This explains the empty look of some of the country. These tracts were taken over by the government, and at present are being sold to the Jewish National Fund. Approximately 137 thousand acres have been transferred to JNF, giving it a total land holding of about 350 thousand acres.

Land Leases

Land is not deeded to new settlers. The deeds are held by JNF and leased to the communal farm or to individual cooperative community farmers. For an example, let's say you wanted to start farming in Israel as an individual farmer. First you could join a new or already organized cooperative community. In a few cooperative settlements, the farmers own their own land. But in most, and in all newly formed communities, the land is leased for 49 years. At the end of that time it is automatically re-leased to you or to your children, provided you or they meet the qualifications of the

cooperative farm — to farm the land yourselves without hired labor, and to sell and buy through the community cooperatives. The land you could lease would vary from one-half to eight acres, depending upon what kind of crops you could grow. You would pay JNF approximately 2 per cent of the assessed valuation of the land as rent each year. Secondly you might decide to farm completely outside any settlement. But here you would find land difficult to buy and very high priced. You would have to find someone who owned land before the Jewish State was established who would sell — and such land is definitely limited.

American farmers would not like this very well. We have long considered land ownership as a right and one of the cornerstones of democracy.

Let's look at the reason behind Israel's national land. The Israelis who favor such a land policy — and there are many who do not — defend national land with these arguments. They say it stops land speculation. People don't buy land and hold it with the hopes that it will increase in value or prove to be a safe investment. Frightened capital, fearful of higher taxes or inflation, doesn't rush to the country to buy farms because the investors feel that land is a hedge against inflation. Here in America we have recently had this rush of frightened capital from the city to the farm.

The Israelis further argue that any increased value of the land accrues to the state. They point out that it keeps the land from being bought up

into big estates such as those that have long plagued many countries of the Middle East. They further say that national land will maintain the agricultural character of the country. Boiled down, it means that cities cannot be built or expanded into rural areas without permission of the semi-official Jewish Agency. Industries cannot take over good farm land without their permission and approval.

There is nothing new about state ownership of land. In the ancient days, the country was generally considered the property of the king, and the king in those days was the state. In some countries like Arabia, most of the land still belongs to the state and could be called public domain. Most of the people are nomads and roam at will over the countryside. Private ownership for them would be a burden. It is only when people stake their tents permanently along the valleys and begin cultivating the land that land ownership becomes a problem.

During feudal times land was generally given in large tracts by the king to the noblemen and the church. In some countries the land has been conscripted from the large landowners and broken up into small farms either given or sold to the farmers themselves. During the Russian Revolution the estates of Russia were seized and became property of the state.

The theory of national land in Israel is in sharp contrast to our own system of free land ownership.

Following the American Revolution Congress passed our own land policy for public domain. Eventually it became cemented into the Homestead Act when land was sold cheaply — \$2.50 an acre — to the farmers themselves who homesteaded the land by clearing it, building homes, and breaking up the soil. The plains of the Middlewest became the home of thousands of farm families.

It will be interesting to follow the development of Israel's national land policy of land owned by the people as a whole in a democratic country.

Americans would be pretty well agreed, however, that nationalized land has little in common with American tradition of the individualistic farmer. Whether he likes to think of it or not, the American farmer is a capitalist through and through.

Who Should Inherit the Land?

IT WAS NEARLY DARK when we turned the car up the short birch-lined lane to the Borg farm. I could hear the familiar *click-click* of the chains on the back wheels of the car as we plowed through the deep, soft-piled snow toward the large buildings that loomed ahead in the half darkness of late afternoon. The half darkness seems to make up most of the Norwegian winters — for Norway is as far north as the mainland of Alaska, and the December sun shines only three and a half hours a day, when it shines at all.

Alfred Borg, the present owner of *Borg*, stood in the doorway of the big two-story house as we pulled into the *gaardstunet*, a three acre quadrangle surrounded by seven or eight large gray and white farm buildings. He called out to welcome us as we stopped in front of the door and explained, I later learned from my Norwegian traveling companion, that Ole Borg was out at the barn and would soon be back. We left our coats and overshoes in a large entranceway with blue plank walls and were ushered into the sitting room with the usual *vaer saa god*, the Norwegian words of hospitality.

We had hardly sat down until with another *vaer saa god*, we were invited into the dining room for supper. It was here that we met the rest of the family — Fru Borg, a motherly woman with a pleasant smile and a happy laugh, and son Amund. Then Ole came in. Ole is a young Norwegian farmer, 24 years old, who is keenly interested in American farm machinery and constantly talks of increasing the efficiency of their farm and lessening the labor required with American machines. I had known Ole in America where he spent seven months last summer to learn how we farm.

It was the day after Christmas; the dining room was still dressed up for the holidays. A green spruce tree decked out in tinsel, electric candles, and tiny Norwegian flags sat over in the corner. A white bell, tied on with red and green crepe paper rope, hung from the ancient-looking, hand-beaten, iron chandelier. A pot of red tulips sat in the center of the table surrounded by miniature *julenisser*, Norwegian Santa Clauses, dressed in red suits with white fur. Even Fru Borg wore an apron with red embroidered Christmas bells. A six-pointed electric star in the window wished *god jul* to the outside world. Even the grandfather's clock along the farm wall seemed to beam with Christmas cheer after ticking in over a hundred Christmases.

After supper we went back to the living room with its pink board walls, its blossom-laden Christmas cacti in front of the two large windows whose

blinds were now pulled to keep out the Norwegian winter, and its red draperies. Over coffee and cakes we discussed the farm itself. As long rows of former Borgs looked down from their black wooden frames, Herr Borg showed us the old deeds, *skjøter*, and explained that all Norwegian farms are designated by official registration numbers, *gaardsnummer*.

Borg has been in the Borg family since 1723. Ole, who will take over the management of the farm this spring, explained that turnips, potatoes, oats, wheat, barley, and timothy and red clover hay are the important crops on the 110 acres of cultivated land. Of equal importance, he told us, were the 900 acres of productive forest that furnished lumber for buildings, work for the farm hands in the winter, and a goodly proportion of the farm income. He brought out piles of record books to answer my questions about the farm, the forest, and the dairy herd. Most farmers in eastern Norway, the best farming section of the country, keep very complete and accurate records on every phase of farming.

Farm Buildings

The next morning as we waded through the snow across the *gaardstun* to the barn, I could not help but ask how the farms in Norway could support so many huge farm buildings. Ole told me that the buildings had accumulated over a number of years. "The house was built in 1849 and the

rest of the buildings at various times since. Many buildings on other Norwegian farms are even much older," he said.

"The barn, completed in 1933, was built in three different installments. And like most of the farms in Norway, the lumber for all the buildings came from the forests on the farm. Then, too, we have to have good barns because of the long, severe winters. Here livestock raising is an indoor occupation for eight months out of the year. Of course," he went on to explain, "labor was cheap when most of these buildings went up, but in the future with the high cost of labor and the high upkeep, new farm buildings will have to be smaller and more efficient."

I could hear the *click-click* of the milking machine as we entered the cow part of the barn. "Our milking machine is similar to those you use in America, but it was made in Sweden. There are a few American-made machines in Norway, but not many," Ole explained. Two lines of red milk cows were eating mixed timothy and clover hay as the two hired hands, a man and a woman, did the milking. "We have 23 head of milk cows now, in addition to our calves and heifers. These small, red polled dairy cattle belong to a Norwegian breed, *Raukoller*. They are smaller than many of your American breeds. A mature cow will weigh about 900 pounds and of course, as you can see, they carry more beef than your dairy herds."

"During the summer the cows spend most of

their time on lush timothy and clover pastures, but from the middle of September until the middle of May, they stay here in their stanchions all of the time. The manure is raked into these openings in the gutters. It accumulates down in the basement until we spread it out over the fields during later winter and early spring. We like to haul it out before the snow melts so we can haul it on sleds. That small trough right in front of the gutter carries the liquid part of the manure to a cistern. We sprinkle it out over the fields in late spring. I don't particularly like the system, and in the future I think we shall not separate the manure."

"Potatoes are the northern European farmer's corn," Ole said, as we started down the steps to the potato cellar. "Now we have to carry the potatoes down these steps when we put them in the cellar and then we must carry them up again as we use them. You see, most Norwegian barns were built when labor was plentiful so no one thought of building the barns to save labor. We hope soon to send the potatoes up and down by elevators like you use to fill your corn cribs."

From the potato cellar we stopped at the root cellar piled high with turnips. "Turnips serve much as silage, even though we feed some grass silage. We feed every cow about 60 pounds of chopped turnips every day. We store the turnips out in the field by covering them with straw and

then with dirt. We bring them in as we use them. That way they keep all winter."

Over in the corner of the feed room I noticed several barrels. Ole grinned as I looked into one of the barrels and found it full of fish in brine. "That's herring. We call them *sild*," he explained as he watched the puzzled look on my face. "You see, protein feeds are very scarce now in Norway, so we feed our cows fish. We soak them in water for a day to get rid of some of the salt and then we feed each cow a fish every morning. The cows actually seem to relish the herring."

At my first breakfast in Norway I had been surprised to find that the first thing I was served was pickled herring. Now I found out that both the people and cattle start off the morning with pickled herring.

Hogs and Sheep

From the cow barn we went through a small door into a hog barn. The hogs, like the rest of the livestock, are kept in their own part of the barn in pens with low concrete partitions. The Borgs keep only 11 head of *Landsvin* hogs, a white Norwegian bacon breed. "We feed our hogs slop made from grain mixed with herring meal, cooked potatoes and whey from the nearby milk factory. Many farmers cook all the potatoes at once and then store them in miniature silos, but we cook them fresh every day in barrels with live steam,"

Ole explained. "Our sows farrow in February and March and again in September. The Oslo market likes for the hogs to weigh from 150 to 200 pounds, somewhat lighter than your American markets want. But just like the American farmers, our farmers like to feed them to heavier weights. We generally sell our pigs when they are about one month old to nearby farmers who fatten them for their own meat. Most of the food on Norwegian farms is produced on the farm itself, you see."

Sheep on eastern Norwegian farms is strictly a sideline. Most farmers keep only a few head, frequently penned off in a corner of the horse barn. The Borgs keep 20 head of mixed breeding. They are sheared both in the spring and in the fall and most of them have long tails. "We have never docked our lambs before, but next year we shall," Ole told me. "Our lambs come the last part of April or the first of May."

I was surprised to find small limbs with dried leaves on them in the feeding racks. "Those are aspen branches. We either cut down small trees in August or we may take the small branches from trees cut for firewood. The leaves are dried after they are tied in bundles and then we feed them along with hay to the sheep during the winter-time."

"We have only six horses at present and we will cut them down to four head because we hope to do more of our work with tractors. But most Norwegian farms still have from 10 to 15 work horses.

The most popular horses here are small, chunky, brown horses that we call *Gudbrandsdals Hest*, a Norwegian breed."

The Borg family has two tractors, both American-made, one a 1924 model and the other a new one bought last year.

By then I could see that nearly the whole livestock operation during the winter is carried on under one roof. The far wing of the barn contained chopped straw, used for feeding the horses, young dairy stock and dry cows, peat used for bedding, hay, two square 25 foot silos containing rather strong smelling grass silage made by adding acid to the grass, farm machinery, and fertilizer. The Borgs use lots of fertilizer on their 110 acres of cropland, as much as 1,500 pounds per acre on their potatoes. "Before the war we bought mixed fertilizer, but now we can only buy the ingredients and mix it ourselves."

As we walked back through the snow to the house, I marveled that here was a farm that had been kept in the same family for nearly 200 years — and that such farms were not at all uncommon. A few days later I was on a farm that had been in the same family for 600 years.

In Scandinavia the family farm generally goes to one son. The father generally gives over control and retires right on the farm. Even the laws are set up to reserve the rights of the family to hold the farm.

Laws in Norway, called *odel*, go back to very

early days. Under the old laws, any member of a family had a right to reclaim land up until 20 years after it was sold outside the family. To keep his rights of rebuying a family farm, the member had to make known his request to reclaim the land three years after the sale. He had to reaffirm it every three years until he bought it back. If unclaimed after 20 years, the land then became the permanent property of the new purchaser. Present laws have shortened this time considerably.

French Farms

In sharp contrast, let us look at the French farms. There is an old story in southern France of eight men and a grapevine. By old Napoleonic laws, inheritance is divided equally among the children. So down through the years, large land holdings were broken up as the land was parcelled out among the children.

Gradually the land area became scattered, fields became smaller and smaller as they were divided and redivided generation after generation.

And as the story goes, on one farm the land had been divided and redivided until now eight men each own a portion of the land required to grow one grapevine.

As we drove along the straight roads of northern France, I noticed small fields, many of them only a few yards wide, scattered up and down the hill-sides.

Godart Marcelcin is a farmer in northern

France. He was out planting potatoes as we stopped along the road to talk to him. A veteran of the first world war, he had served with the English troops and could speak English very well.

"Too many small fields make a French farmer's life difficult here," he told me. "Some of us spend more time running from one small field to another than we do working in the fields."

Germany Has the Same Problem

On the walls of a German extension office I saw before and after pictures of a land consolidation project. One looked like a crazy quilt pattern.

"This is a map of land owned by different farmers before consolidation," I was told. "As you can see, each farmer owns a dozen small tracts scattered all over the countryside. We actually have cases of strips of land so narrow the farmer can't drive his tractor down it without one of the rear wheels running on his neighbor's land. Now here is the same communiy after land consolidation."

I was then shown a map of farms in large blocks. "Not only does it make the farm land more convenient and more usefully located, but the farmers can now use modern equipment which was out of the question when their land was scattered in small garden sized patches, frequently far apart. Of course, at first some farmers hesitated to consolidate their land because they felt that they had taken better care of their patch than their neighbors. Or they did not like to give up a

certain tract because it had been in the family for several hundred years. But they generally agreed once they thought over the advantages pointed out to them."

Part of this trouble goes back for many years to the early German settlements called *Germanische haufendorf*. The farmers clustered their farmsteads around the church to protect themselves against ambush by hostile neighbors. As new cropland was cleared in the forest, each farmer would get a new plot of land.

As in France, in some parts of Germany when a father dies, his fields are divided equally among all the children. That means that if the farmer owns four fields and he has four children, each child will get a fourth of each field.

People in Europe don't like to sell land that they have inherited. They don't like to part with land that has been in the family, perhaps for centuries. Since land is scarce, people feel that its ownership gives them a certain security.

Some people have feared that here in America we would eventually be confronted with this same problem of land divided among the heirs. So far, this has not happened. Perhaps it is because land here is not so scarce. Or perhaps we do not have the long tradition of family land ownership.

I think it is because we have learned that the family size farm is the most profitable. That's why farms are more likely to be sold and the money divided rather than the farm land parcelled out.



Fig. 7—The future of this German farm lad depends on how his people will move. To preserve democracy they must cast off the cloak of political neutrality (Chcp. 7).



Fig. 8—The Borg family in Norway eat their Christmas dinner on the farmstead which their family has owned since 1723. Norwegian laws and customs protect the rights of the oldest son to inherit the farm. Many Norwegian farms have been in the same family for centuries (Chap. 9).

Our problem has been how to keep the farm in the family rather than how to keep the farm from being divided into small, widely scattered patches of land.

With more and more money needed to get started farming in America, we may soon come to the place that a lack of capital is as great a handicap for the would-be American farmer as the scarcity of land is now a handicap to the would-be European farmer.

One way to bridge this is for farms to pass from father to son with as few debts as possible acquired in the transferral.

A few years ago I knew of an elderly farmer who died and left a very good cornbelt farm to his children. One son had been farming it for a number of years. But there were several children. The farm was sold because it would have been nearly impossible for this son to have paid off his brothers and sisters at the then prevailing land prices. This is not an uncommon event.

The idea of equal inheritance is firmly grounded in American thinking just as in most western culture. We're not apt to change it, but more and more farmers are working out sensible agreements with their sons who want to farm so that the sons can take over without financially overburdening themselves. Father-son partnerships have been on the increase. It is a tradition to be encouraged in America.

Security for the Tenant

IS YOUR LEASE UP? Will you have to move to another farm? Not at all — that is — if you have been doing a fair job of farming your landlord's land. Or maybe you and the landlord can't agree who is to pay for the fertilizer you will use next summer. But that's no problem. It is all spelled out by law. If there is any further question about it, the county agricultural land tribunal, made up of local tenant farmers and landlords, will settle the matter for you.

No, don't try it in America — it won't work. But that is the way it is in Britain. It is all part of the agricultural holding act that gives security to tenants and strips the landowner of power over his own land.

In England and Scotland three-fourths of the farmers are cash tenants and three-fourths of the farm land is farmed by tenants.

The tenant question, left over from medieval days when feudal lords owned the land, has been one of Britain's big problems. Many other countries, particularly in northwestern Europe, have been faced with somewhat the same headache. They generally have broken up the big estates and

parcelled out the land to farm operators. Britain's solution is quite different.

For a long time the British tenant farmer has had many rights under law. Tenancy for individual farmers generally has been long. The average tenant has lived on the same farm for over 20 years, and many British tenant farms have been run by the same family for generations, as each son takes over from his father.

The Agricultural Holding Act

The Agricultural Holding Act of 1948 now gives the British tenant almost complete security of tenure. For all practical purposes he might as well own the farm. In sharp contrast to southern Europe where the tenant is frequently at the mercy of the landlord, the British tenant farmer is definitely in the saddle.

Barring death, about the only way the landlord can remove his tenant is in the rare case when it can be proved that the tenant is doing a very bad job, or failing to observe the law. Nearly every phase of responsibility is outlined in the new law — who should repair the fence, pay for the limestone, or build a concrete walk from the house to the barn.

Now let us take a typical case. John Young is a tenant farmer in northern England. He has lived on the same farm for the last 30 years. Under the new law his lease is practically assured for the rest of his life.

His two hired hands milk the 50 cows stanchioned in his new dairy barn, or plow the hundred acres of cultivated land. The farmstead is well kept, and would be a good farm in any country. Farmer Young doesn't want to own his own farm. He would say something like this: "I run the farm pretty much the way I want to. Why should I tie up my money in the land? I would rather use it to buy more cattle or machinery, or fix up the buildings."

Under special agreement with his landowner, who lives in London, Young built a new dairy barn last year. Should he leave the farm, the landowner would have to pay for the new barn or any other permanent improvements tenant Young has made on the farm.

Last year the landowner built a new machine shed. Of course there was no difficulty since this landowner takes a good deal of pride in his farm. But had the landowner refused to build a machine shed, Tenant Young could have taken the matter up with the land tribunal.

If he could have proved that he needed a machine shed for proper operation of the farm, he could have forced the landowner to build. Under the new law, just as the tenant must keep the farm in good repair and do a reasonably good job of farming, so the landowner must make whatever capital investments are necessary consistent with good farming practices.

"But what if the landowner did not have the

money," you ask? That would be no excuse. He would either have to sell the farm, or the government would take it over and either buy it or sell it to someone else.

Now let us say that you are the landowner and your tenant farmer doesn't do a good job of farming. The Ministry of Agriculture has the power to place your tenant under supervision. Just as the Ministry can direct you to make certain repairs or alterations of permanent buildings, so the Ministry can insist that your tenant change the cultivation of his land, the management of his livestock, or the fertilization of his soil.

If after a year he fails to show satisfactory improvement, the government will dispossess your tenant. You then must get an approved tenant, farm it yourself, or the Ministry of Agriculture will operate it through its county agricultural committee.

Let's get back to Farmer Young who has two sons. He plans for his older son to take over the farm gradually. Since the farm isn't large enough for two tenants, his younger son will have to find a farm somewhere else to rent if he farms. That will not be easy, for there just aren't many farms available.

Many landowners would like to move out their mediocre tenants, but as long as the tenants meet the minimum requirements, they cannot be moved.

The few landowners whose farms are tempo-

rarily without tenants generally prefer older, more experienced farmers since they will have little chance of getting rid of their tenants once they move in. In giving the tenant security, the new law has stopped the competition among tenants. John's second son will just have to wait around for his turn.

Farmer Young's landowner is very lucky. Young is a good tenant. But many landowners find themselves stuck with tenants who are just good enough to keep from getting kicked off the farm, but not top tenants.

This has been reflected in the price of land. A good farm with a poor tenant may go begging. A good tenant increases the value of the farm just as much as good buildings or good land. Farms that have lost their tenants and are ready to be re-leased bring high prices, much higher than farms with tenants.

Many farmers feel that the law is good, but the good husbandry clause has not been enforced. Said one farmer, "You have got to be awfully bad to get kicked off." Said one official on the land tribunal, "If we were too severe, people would cry 'police state.' "

Landowners dislike very much the clause that allows the government to come in and take over if the tenants prove to be bad farmers.

A Scottish agricultural leader told me of one farm owner who farmed only 60 acres. To increase the size of his farm, he bought a neighboring farm

of about 60 acres. Certainly these two farms could be operated more efficiently as one unit, but the farmer could not get possession because the tenant was doing a passable job of farming.

The present law doesn't allow dispossession to increase the efficiency of a farm.

You probably wouldn't like the system. To us, I think, the Scandinavian system of 90-year farm loans to purchase land seems much better. But you must remember that in England there is a limited amount of land, and even before the act was passed it was very difficult to purchase a farm.

Said one farm leader who helped frame the law, "In America, farmers originally got their land from the government, but here all the land was once owned in large feudal estates. Many laws have been passed that helped liberate the tenant, but this act is the cap sheaf."

In America we have long had a tradition of free land ownership. We have sought to correct poor management of land by education through our schools and agricultural extension service. This has at best been a slow process. Absentee land-owners are frequently hard to reach by these methods. In the meantime, many acres of land have been abused, many more ruined, by a tenancy system which any more advanced European system would call scandalous.

They would correct all this by rigid laws. Some people in this country would use laws to regulate tenancy and land ownership.

I am not ready to adopt this method completely. But I do feel America's educational system should be speeded up. Even in a country as large as ours and with so many acres of farm land, there should be a limit to the wastage of land resources.

In America, laws for making farm leases come under the authority of each state. For the most part they are based on common laws and court decisions of the past. Most states are badly in need of well thought out land tenancy laws that would outline at least minimum responsibilities of tenants and landlords, particularly where there is no written lease. Today that would take in more than three-fourths of the rented farm land in our country.

But laws should not substitute for education.

More Food From Every Acre

ENGINEERED FIELDS . . . miles of endless dikes to hold back the sea . . . intricate networks of canals drain the land . . . acres and acres of black and white cattle graze in miniature green fields — that's Holland.

With a quarter of the land below sea level and nearly half below high tide, much of the land would be flooded if it weren't for the dikes. Driving through Holland it seemed that we were nearly always driving along a dike or on top of a dike. Literally thousands of pumps, most of them electric, lift the water from the canals and dump it out into the sea. Picture postcard windmills stand idle against the horizon to be used only in emergencies. Small drainage ditches surround nearly every field and even serve as fences. In the cities, streets run on either side of canals. Many cities have nearly as many canals as streets.

Various types of soil require different water tables, all controlled by the elaborate water system. In the peat areas that we saw, the water table was kept quite high to keep the peat soil from drying out and blowing away. In the heavier soils, the water table was much lower.

Holland is a very small country — about one-third as large as Indiana — with a greater number of people. Crowded into Holland, at the rate of 697 persons per square mile, are 10 million people, about three times as many people as there are in Indiana. With the highest birth rate in Europe and the lowest death rate in the world, Holland adds 200 thousand more people to its population every year.

Even with such a dense population, Holland not only produces enough food for her own growing population, but has become one of Europe's chief exporters of milk, eggs, bacon, cheese, and butter. Holland's farms are virtually factories that transform large quantities of imported and home produced grains into livestock and poultry products. About 20 per cent of the people live on farms — about the same proportion as in the United States. Most of the farms are small, with the average sized farm about 24 acres. Nearly half of the farmers have less than 12½ acres.

Holland farmers have not always been producers of specialized crops. Once they grew large quantities of grain. In the latter half of the 19th century, American farmers began growing large quantities of grain on the new land opened up in the western United States. Many Holland farmers, unable to compete with the cheap American grain pouring into Europe, went broke. Other farmers turned to intensive specialized farms and began producing dairy products, eggs, meat, flower bulbs, seed potatoes, and other specialized products.

In such an intensely farmed country, I was surprised to see so many fields of pasture and meadows. Over half of Holland is covered with dense growing, luxurious grass and clover. Because of the severe shortage of protein cake, the Dutch dairymen feed lots of well cured legume and grass hay.

A cool climate — it rarely gets over 75 degrees in the summertime — an evenly distributed rainfall, and heavy applications of fertilizer and manure spur the pastures on through the summer.

A Typical Farmstead

To see an outstanding herd of Friesland cattle, we headed for the noted dairy farm of I. N. Wassenaar, president of the Friesland Herd Association. It was Sunday morning as we nosed our car out of the north Holland city of Leeuwarden.

Around the farmstead the drainage ditch spreads out into small ponds covered with white blooming water lilies. Half hidden by clumps of trees and flowering shrubs, the typical Friesland farmstead had a neat brick, red tile-roofed house joined directly to the huge thatch-roofed barn.

When we arrived, Farmer Wassenaar was showing one of his prize bull calves to visitors from South Africa, two young men who hoped to take back a few choice Dutch cattle to their own homeland. Mr. Wassenaar greeted us in excellent English. He has made a number of visits to America, Canada, South Africa, South America, and Australia. Today the fine Dutch cattle of Friesland

go to nearly every country of Europe, South Africa, and South America. We had seen large herds in Italy that had been imported from Holland. Even in far away Israel and the Middle East most of the improved dairy cows carry Dutch blood.

In the wintertime the thirty-six dairy cows stand in line along the concrete mangers where they are tied with leather straps around their necks. The center part of the barn is reserved for hay, elevated by a built-in conveyor. Hay fields frequently are grazed early in the spring and late in the season after the hay has been cut. Because of the high moisture in the air and frequent cloudy weather, hay is cured in long rows of haystacks. Dutch farmers pile this freshly cut hay over tripods built of poles to keep it green while it dries. At harvest the Dutch farmer hitches a horse to one leg of the tripod and drags the haystack into the barn or hay shed. Many hay sheds are built without sides and with an adjustable roof that can be raised or lowered, depending on the size of the hay pile.

After taking us through the barn, now empty and scrubbed clean, Wassenaar showed us his cows grazing the nearby field. The cows run out on the flat pasture fields for about seven months during the summertime. Around seven o'clock in the morning and four o'clock in the evening, the milkers, many of them girls, go out in a horse cart to milk the cows in the pastures. We saw a few modern dairymen who had milking machines installed on their wagons. They tied the cows to

either side of the wagon while they milked them by machine powered by a small portable motor. And such cows they have! Large black and white cows with straight top lines, long, level rumps and shapely, capacious udders. On twice a day milking, the Wassenaar herd averages about 15,000 pounds of 4.1 milk.

Holland has nearly a million and a half milk cows. The average milk production is nearly 8,400 pounds. In comparison, the United States average stands at a little over 5,000 pounds. The average for Wisconsin, one of our best dairy states, is only a little more than 6,000 pounds.

I noticed that there were no fences around the fields, only small, narrow drainage ditches. Mr. Wassenaar told us that few people build fences in Holland and that even during the summer when the ditches are nearly dry, the cows do not cross them. Any adventurous rogue who thinks the pasture greener on the other side is promptly sold before she teaches the other cows. With the deep, luxurious grass and clover mixed pastures, perhaps the cows find no reason for crossing the ditches.

Heavy applications of fertilizer — pre-war Holland used an average of 56 pounds of nitrogen* per acre on their soil compared with about 2 pounds in America — and the rich, alluvial soils built up by centuries of flooding of the Rhine and Maas rivers, give phenomenal yields of grass and crops. In 1949 the average wheat yield was 61 bushels, oats 88 bushels, and potatoes around 400 bushels.

Wassenaar went on to explain to us, "While the Frieslands make up most of the cattle of Friesland Province and over two-thirds of all cattle in Holland, there are two other important breeds — the red and white Meuse-Rhine-Ysel that looks very much like the Friesland except that they carry more beef and then there is the less important dual-purpose, Groningen.

"My milk goes in to the nearby town of Leeuwarden where it is used as whole milk, but much of the milk produced in Holland is made into the famous Edam and Gouda cheeses that are sent to countries all over the world. More than a fifth of the milk in Holland is made into export butter. In the early days, cheese was made by the women on the farm, and farm boys frequently selected their wives not so much for their good looks but because they could make good cheese. It was a good *keezzer* that had the most suitors. Now, of course, we make our cheese in modern dairy plants, most of them operated cooperatively."

Flood Control

Pride of Hollanders is the seemingly endless miles of dikes, canals, and ditches that drain the land and hold back the sea. A quarter of the land is below sea level and nearly half would be flooded by the tides and high water if it were not for the dikes. Literally thousands of pumps, most of them electric, lift the water and pour it into the sea.

In the days of the Romans, the Zuider Zee was

merely a number of lakes, but with the land sinking at the rate of eight inches every 100 years, more and more of the fields were flooded or destroyed by the waves. Land reclamation began before 1300, but it was not until 1500 that the sturdy Dutchmen were able to build dikes as fast as the land sank. It was not until the last century that they began to gain on the encroaching sea.

The Dutch engineers told us that plans were under way to drain nearly half of the remaining Zuider Zee. When these projects are completed, they will add over a half million acres of badly needed land, increasing the total cultivated land by 10 per cent and furnishing homes for 300 thousand people. That is very important in such a densely populated country where every acre must produce its dead level best.

With many mouths to feed and a limited amount of land on which to grow crops, the Dutch farmer makes every acre count. One cannot help but be impressed by the tremendous yields he gets from his fields and from his livestock. His greatest emphasis is on yield per acre.

This is in sharp contrast to America. Here our emphasis has been on production per man hour. There is no doubt about it that when it comes to the amount of food grown per acre, the good European farmer beats us all hollow.

We visited farms in northern Italy in the rich Po River Valley that last year produced 170 bushels of hybrid corn per acre. We saw many fields that

had produced 140 bushels. How do they get such high yields? First, they pile on the manure and fertilizer and then they irrigate their fields. Of course, these were the better farmers.

Most American farmers have more machinery than European farmers. That means that they use a lot less labor. Here in America a grain or general purpose farmer can easily farm 200 to 400 acres by himself or with one hired man. If he is a dairy farmer with that much land, he will probably have no more than two hired men. On a similar Italian farm we saw 35 workmen. Most European farms that size might have as many as twelve workmen, at least five or six.

Only on British farms will you find anything like American mechanization. The smaller Scotch farm might actually have more power per acre than you do. Nearly every farmer has a tractor in the rich farming section of Aberdeenshire, even though some of the farms may be no larger than 60 acres.

The large farmers that we visited in the Fens in England, the low muckland along the English channel, have a lot of modern farm equipment. For instance, Smith Means lives near Outwell in Norfolk. He grows turnips, wheat, barley, oats, and sugar beets on his 600 acre farm in the Fens. Completely mechanized, he has three tractors, a pickup baler and a complete line of other power equipment. He would be a very good farmer even by American standards.

As a whole, however, British farmers have not learned how to use their machinery to as good advantage as we do. We saw numerous men riding grain drills behind the tractors and large tractors pulling four-foot mowers. This is probably because they have not used power equipment as long as we have and have not learned yet how to make the most possible use of it. However, unless the American farmer is a far better than average farmer, his yields per acre will not measure up to the European farmer who throws on heavy applications of fertilizer and even irrigates his field when necessary.

The American farmer is just now learning to make every acre count. As our population increases in America and farmers are called upon to produce more food, it will be necessary that we too learn to put every acre in the most profitable crops and get the highest possible yields per acre. In this way every acre becomes larger. This is American agriculturists' greatest frontier.

Trees, Grass, and Cows

AT THE FOOT of the southern Alps in Italy, the peasant farmers are unbelievably poor. Twisted grapevines and knotted fruit trees struggle for existence on the poor clay soil.

In the days of the Romans these rolling hills were covered with lush pasture and deep forest. Centuries ago the trees were cut down and hauled away for lumber. As the country became more thickly settled, more and more pastures were plowed up so that successive generations of farmers could make a living.

Today, these peasant farmers own little livestock. Stately oxen with large, up-turned horns pull crude wagons up and down the roads — picturesque, but not very efficient, and only the better farmers can afford even oxen. I saw a man on one farm pulling a small plow with a rope over his shoulders, while his wife trailed behind guiding the plow.

It would not have had to be so. Just over the Alps in Switzerland, the village of Sachseln clings to the side of the mountain as if it might slip into the sapphire lake at its foot.

It was spring when we visited Sachseln. The steep pastures that surrounded the little village were covered with apple trees loaded with blossoms. With a backdrop of towering, snow-capped mountains, the village looks like a picture town right out of a tourist guide.

Typical two-story Swiss houses, with hanging eaves to keep the snow off their quaintly carved balconies, crowded around the slim spire of a medieval church.

Our guide was the manager of the Kruez Hotel, an ancient structure that stands next to the church. The hotel has been operated by this same family since the 17th century.

We drove from town up the narrow, winding blacktop road that crawls up the side of the mountain, past ancient looking Swiss farmsteads.

First stop was the farm of Farmer Spichtig. Several Brown Swiss cows grazed in a small pasture near the barn. Women were washing clothes in an iron kettle outside.

The Spichtigs milked 20 cows. Rows of metal plaques nailed to the side of the barn served as a record of the prizes won at local shows. Pride of Farmer Spichtig was his young bull that had won first prize at what corresponds to our county fair.

The Swiss cattle seem smaller and much more refined to me than most of our own Brown Swiss. Too bad that present restrictions do not allow us to import some of these fine Swiss cattle.

Farmer Spichtig houses his bulls and calves in

one barn, the cows in another. The cows graze out much of the year.

The cows move up the side of the mountain as the snow melts. Here they graze in pastures above the forest-clad slopes. In the winter the cows usually get only hay. A few farmers feed silage. Milk yields are high, between 6,500 and 11,000 pounds of 4 per cent milk.

The Swiss mountain farmers have developed animals that utilize grass and hay. It is doubtful if they would do as well as our cattle under heavy grain feeding, and our cattle probably would not do as well in the mountains of Switzerland.

Every now and then as we traveled along the road, we heard the melodious clanking of Swiss cowbells. Then a herd would appear on the way from the valley up to the mountain pastures. One herdsman led the herd, while another with his dog brought up the rear. They carried provisions in packs on their backs.

Nearly every cow had a bell. Many of them were huge bells, a foot wide. Wide collars with polished brass buckles held the bells on. Frequently these were ornamented with colored leather bearing the cow's name.

I asked Farmer Spichtig why he put such large bells on his cows. He gave the same answer that most of the Swiss farmers give. "The bigger the bell, the prouder the cow. The prouder the cow, the more milk she gives."

These prosperous Swiss dairymen are quite a

contrast to the poor Italian peasant tending his vineyards with great hand labor. Down through the years the Swiss have learned to make a good living on a rugged landscape. Their secret? Trees, grass, and cows.

In the summer they make hay in the lower valleys and graze their cows in summer pastures above the timberline. In the wintertime they tend their cattle and cut timber on the mountain. The timber furnishes good income and work in the off season. The Swiss farmer has learned that it doesn't pay to have all his eggs in one basket. He can make a good living on poor land with grass, cows, and trees. A lesson we can well learn in this country!

This may sound a little strange to American farmers on rich, flat, cornbelt farms. But I came from southern Illinois where farmers still try to farm hills as they would the black, flat land of the cornbelt.

Tons of topsoil washing down the creeks remind me of what happened to the Italian hills. *The future prosperity of thousands of farmers all over America will depend on how soon we learn the lessons that the Swiss farmers found out years ago.*

I grew up on a farm that was homesteaded from the government in 1850. The farm was covered with timber. Immediately the farm family began cutting down the huge white oak trees. They built a house and barn with the logs. They dug a well. They cleared land to grow corn.

Today, over half of the rich topsoil has washed down Spring Branch. If that farm is farmed during my lifetime as it was in my grandfather's day, it will be completely worn out before I am an old man. Our family which has made a living by farming for three generations will have to desert it.

We need more farms with trees, grass, and livestock.

The Forests— Our Neglected Income

NORWAY IS A LAND OF FORESTS. They spread out over the countryside and climb the slopes of the mountains. They cling to the steep sides of the fjords and even invade the cities. The famous ski jump, Holmenkollen, is inside the city limits of Oslo, but it is surrounded by deep forest.

In the slack winter season, Norwegian farm hands spend the short days in the forest cutting the snow-laden trees and dragging the logs to the roads and rivers. They use small, chunky horses, to drag out the logs. They leave behind long trails through the snow under the dark green boughs of the pine and spruce.

Otto Langmoen is a lumberman in Hof, a county in eastern Norway. From his sawmill lumber goes to all parts of that small country and even across the border into Sweden. Part way by train and then by ship to Narvik in the far north go loads of his lumber to rebuild the houses and buildings destroyed by the Germans during the war.

Otto Langmoen is not a big lumberman. By nearly any standard his sawmill is small. He employs only forty men and he cuts only six to seven thousand cubic meters of lumber a year. Otto Langmoen's sawmill is typical of the many local sawmills scattered throughout Norway.

Because he has no lake in which to store the logs, he cuts his logs into lumber during the winter and spring. Farmers who hold their logs to be cut into lumber in the summertime must store the logs in water to keep them from splitting in the summer sun.

Did you ever tramp through a forest in America and come upon the deserted location where a sawmill once stood? Did you notice the mountains of rotting sawdust? You'll see nothing like that at Langmoen's sawmill. He has just completed a long building with large bins in which to store the sawdust and keep it dry. Overhead pipes blow the sawdust directly from the saws to the bins. Nearby farmers haul the sawdust to their farms to use in their barns for bedding down the cattle. Mixed with manure, the sawdust is eventually put on the cropland to add organic matter to the soil.

A tall, lank man with sincere blue eyes, Otto is more than a sawmill operator. He is a forest owner himself, and you will not talk to him long before he will begin to tell you about the importance of good forest management to Norwegian farmers. It is one of the chief incomes of Norway.

You'll find few deserted sawmill sites in Nor-

way. Sawmills just don't cut everything and then move on to new forests. With properly managed woodlands, Norwegian farmers cut some timber every year. The sawmills stay on the same location year after year with a constant supply of logs.

Take the forest of Ragnar Baanrud. Test borings on random selected trees on his 1,200 acres of forest land tell Baanrud how fast his trees are growing. In years when lumber prices are low, he may not cut much, but choose to wait and cut more when prices are good. It is just like leaving the interest on money in the bank to use next year or the year after that. Most of the logs come from thinning out stands of trees. But each year in the Baanrud forest, about 10 to 15 acres — depending on how fast the trees are growing — are cleared off to establish new plantings. Large, straight trees are left scattered over the clearing to furnish cones to start new seedlings. In five to ten years the new seedlings push their way up through the needle and moss covered soil and a new forest is on its way.

It will be approximately 80 to 100 years before these seedlings will be large enough to produce saw logs. For every forest tree, at least five, and more often twenty or so seedlings start. Where seedlings fail to come up at once, or where spruce is wanted on land that has had pine forest, the seedlings furnished at nominal prices by government nurseries are planted with spades or mat-ticks.

The life of a young seedling in the Baanrud forest is rigorous. Only the fastest growing trees survive in the competition for soil and light. After 30 to 35 years, the trees are about ten to fifteen feet high. It is then time to thin the stand. The crooked and smaller trees are cut up into firewood to burn during the long, cold winters. Each room in the many roomed farm houses has its own wood stove, frequently an old European model of the Ben Franklin type. Surplus wood is sold in town or to nearby farmers who have no forests.

Later some trees may be thinned out every 10 to 20 years. Until they are large enough for lumber, the trees go for firewood or to the paper mills.

Twenty-five to thirty farms with forests similar to Ragnar Baanrud's furnish a steady supply of logs for Langmoen's mill. Much of the timber in Norway moves on the rivers. As the logs are cut in the forests, they are dragged or hauled to the rivers and put on the thick winter ice. They are bought by the various mills when they are delivered to the river. In the spring when the ice thaws, the melting ice and snow fill the rivers and send millions of logs down toward the ocean. Many large sawmills are located on rivers near the ocean. Much of the lumber of eastern Norway goes down the Glomma River to the port towns of Sarpsborg and Fredrikstad, where the logs are stacked under water until they can be sawed, and much of the lumber is shipped then by water to the various ports of Norway or exported to other

countries. Langmoen's mill is a small local mill and the logs are delivered by the farmers on sleds and trucks and piled outside to be sawed immediately into lumber.

Even in eastern Norway, the main farming section, most farms have large forests, for even here much of the land is too steep for cultivation. Less than 20 per cent of the total land here is in cultivation. For the whole of Norway less than 10 per cent is in cropland. Firewood, pulpwood, and logs for lumber make up a large proportion of the farmers' income. Most of the forests have pine on the poorer land and spruce on the better forest land.

Because of its large, well managed forests, lumber, lumber products, and paper are plentiful and cheap. Much of the land in the northern half and central part of the country is high — above 2,000 feet — and the summers short, less than 120 days of growing season, so trees are nearly the only crop that can be grown.

Today, facing many shortages and badly needing foreign exchange, Norway can well be proud of the Otto Langmoens and Ragnar Baanruds through whose wise management she has a plentiful supply of lumber now and a bank account of lumber for the future. In Otto Langmoen's words, "Trees are the life blood of Norway."

Timber could be an important crop to American farmers. Let's take my home state of Illinois. In Illinois we don't think much about our forests,

yet we have four million acres of woodland. Many a southern Illinois farmer who never thinks that he has a forest will have from one to four acres out of every ten in trees. He isn't in the forest business — he has only useless brush, or rotten, scraggy trees not even fit for good firewood.

A short time ago I drove through northern Wisconsin and Minnesota. Weatherbeaten houses and dilapidated barns seemed to struggle for their very existence on the few cleared acres. Here farm income is low. Crowding up to the very farmsteads were acres and acres of second growth brushland. With the exception of some pulp wood, these acres give little income. It will take a lot of work to get rid of the weed trees and a generation of time for these acres to produce useful lumber.

Yet here, at their very back doors, could have been the solution to good living for these people had we taken care of this forest land. It can be in the future, if we start now to build good forests.

Because we have not thought of forests as a crop, the American farmer loses millions of dollars every year. Lumber prices soar as we continue to plunder our forest land. Farmers strive for their very existence on land where they could make a decent living.

Grass by the Tons

IN GERMANY I visited the farm of Otto Feury, a few miles east of Munich, near the cross-roads town of Steinhöring. To get to his farm, we turned off the main road east of Munich and headed out on a small winding gravel road that took us past large farmsteads crowded on small knolls, through small forests of dense growing pine trees with overhanging limbs that nearly swallowed up the road. At last, after asking our directions several times, we drove up to the three-story, ancient-looking stone house. In the courtyard I met Mr. Feury. I had first met him when he visited American farms about a year ago on an Allied government-sponsored trip to America.

Like most Bavarian houses, the house and barn were connected and along with another building for farm hands, surrounded a court. Built many years ago, the roof of the cow barn, like some of the rooms of the house, was stone vaulting. *Thail-ing* consists of 250 acres. The average sized farm for this section of Bavaria is 25 acres. One-third of it is in forest, one-third in cultivated crops, and one-third meadows — and such meadows! I

saw 100-year-old permanent pastures that still were covered with thick growing stands of grass and clover.

Said Mr. Feury when I quizzed him on how he kept old meadows in such good shape, "We must take care of our meadows. They, along with our forests, furnish most of our living." I could believe it as we walked out over the rich turf. "We put on seven to ten tons of manure every three years," he went on to explain. "Each spring we spread 250 pounds of superphosphate, 125 pounds of potash, and 100 pounds of nitrogen fertilizer. We have our fields divided into eight small pastures. The milk cows graze in a pasture for three days, then we follow up with the calves and horses for two days. After this, we mow the field, harrow it to spread the manure, and add nitrogen and superphosphate. Or we may add liquid manure if it is rainy and then we don't put on fertilizer. This means that we get around to each pasture at least five or six times every summer."

In England I visited a farm that was cutting orchard grass for hay. They were getting three tons of hay per acre with a protein analysis of 15 per cent. That field had had 1,000 pounds of balanced fertilizer applied at seeding time. Many English pastures may be top dressed with nitrogen three or four times during the grazing season. The good Holland farmers figure three cows to every two acres, and that may include land for hay.

The European and British farmers are head

and shoulders above us when it comes to growing grass. I just haven't seen pastures and meadows here in America that look anything like those I saw in Europe.

True, the northwestern European farmer and the British farmer may get more rain during the summertime than we here in the central states, and he has cooler weather, ideal for grass. But in the hot, dry fields of the Po River Valley, clover is irrigated. Sprinklers play over pasture fields in the valleys of Norway where it is much cooler than in America.

With the scarcity of protein, the British and European farmer turns to his pasture and hay fields to supply his cattle and sheep with needed protein. In Norway the cows may be fed a salted herring a day to increase the protein in the ration. By putting on extra heavy applications of nitrogen, the European farmer boosts the yield of protein of his grasses and legumes. I saw alfalfa fields in England cut at the very beginning of bloom, then top dressed with nitrogen to give them an added kick to start off growing again. As a whole, the European farmer cuts his grass at a much earlier stage than we in order to boost the percentage of protein. I saw dehydrated grass that was running 18 per cent protein.

Nearly everywhere in Europe, the milk cows during the winter months eat high protein grass silage or grass mixed with legumes. In Italy they feed ladino clover-grass, in England orchard grass,

and in Scandinavia a mixture of grass and red clover. The European farmer utilizes his plant proteins in legumes and grasses to the fullest advantage.

It works out about like this. By changing the cattle every week, you get about 15 per cent more grass than if you use only four or five changes of pasture. You can figure on getting about 25 per cent, sometimes even more, on top of this when you give the cows a new pasture every day.

In Great Britain, Holland, and other parts of Europe, as well as New Zealand, they give their cows a new pasture every morning and night. Why? The cows are on the pasture when it is at its very best. The grass and legumes recover much sooner if they are grazed quickly and then allowed to rest.

On new pastures, cows eat grass like a lawn mower cuts. The cows spend their time eating rather than tromping down grass in a search here and there for lush tufts. Very little uneaten grass is spoiled by manure and the manure is spread more evenly over the field. The cows eat all of the grass and don't leave patches of uneaten grass or weeds.

Cows normally do what is called *selective grazing* if they run in large fields. They will continue to eat down the better grass and legume plants and turn up their noses at the ones they don't like.

Eventually good grasses and legumes are either killed out or weakened by continuous grazing,



Fig. 9—These Israeli youngsters live on a kibbutz, a communal farm. Most of the communal farm land is owned by the Jewish National Agency which rents it to the farmers (Chap. 10).



Fig. 10—This French farmer spends much of his time going from one small plot of land to another since his farm consists of many small patches scattered over a wide area. This problem, caused by land inheritance laws, plagues much of central Europe (Chap. 11).

while the weeds and poorer grasses continue to thrive and eventually take over.

Strip Grazing

In England they call it *strip grazing*. Here's how it is done. Fields are generally divided into permanent pasture fields, say 150 yards long and 50 yards wide. Cows are kept on a small portion of the large field by an electric fence.

The cows are turned on the new pasture when it is from six to nine inches high. That's the time that grass has its highest feeding value, and grass and legumes are growing fastest. Enough cows are turned on the plot so they will have it eaten down in a day's time. An acre will feed from 40 to 80 head at first. Later in the season, it will furnish feed for fewer cows.

In the fore and aft plan, a lane is first fenced off with an electric fence along one side so the cattle can get to water. Then the electric fence is put up to give a strip the necessary size. You will have to use a little care not to get the strip too narrow to start off, or the cows will horn each other. It may be necessary to have a little larger strip for safety's sake than the cows will clean up.

The fore or front fence is moved up at least once a day. Some dairymen will move it up when the cows go out to graze in the morning and move it up again when they are turned back in the pasture at night. As the strip moves across the field, a back, or aft electric wire is used to keep

the cattle off the land that has been previously grazed.

The back fence is moved up every week. With a little experimenting, it is a simple matter to figure out how much space to give the cows so they will have the strip all eaten down to two or three inches high.

The half clock method works about the same way, except that the electric fence goes out like spokes from a wheel from the area with the water tank. Again the front wire is moved at least once or perhaps twice a day, in the morning and at night, and the back wire is brought up every week. After the cows are taken off the field, it is topped with a mower, the droppings spread with a harrow, and the pasture top dressed with nitrogen and phosphate.

Strip grazing has already come to California. It undoubtedly will be used more and more in this country.

For the most part, the northwestern Europeans have spent more time breeding adapted varieties of grasses and legumes than we have. We are just now setting up the machinery in America to do this job.

The European has another trick to grassland farming. So far in America we have thought largely of growing mixtures of grasses and legumes that do well on certain types of land. The northwestern European farmer is ahead of us here. He

thinks not only about what will grow well on the land, but plans a pasture rotation of various mixtures to furnish him grass when he needs it. If he wants to put up silage in the spring, he has a field that makes good silage. His pasture mixtures are planned so that he has a continuous grazing season during the summer.

I visited a farm a few miles north of London. The farm kept 20 dairy cows. The pasture land was divided into 10 blocks of five acres each. Eight of the blocks were used for pasture. In these blocks were grown five different pasture mixtures. The farmer had drawn out a chart so that he would know how to graze his cattle intelligently.

Two blocks were planted to perennial rye grass and white clover which came on early for early grazing. By the time the cattle were through there, they were ready to move onto orchard grass and white clover fields. These fields had been cut early in May for silage. Nitrogen had been added so that it was up big enough to pasture by the end of June when the rye grass was playing out. The fields of orchard grass and alfalfa were used for drouth insurance. They were ready to graze during the dry period of August and September. If there was plenty of rain, he would put the grass from them in the silo. If the weather was dry, he needed it to graze the cows through the dry period. Two other blocks were used to graze late in the fall.

By planning his pasture program this way, this English farmer insured himself a continuous supply of good forage the year around.

To my knowledge, few if any people in this country are using such a program. Yet it is the one way to insure a continuous supply of good quality pasture, hay, and silage the year around.

Tailor-Made Food and Livestock

THE FRUITS THAT GRACE your Sunday dinner table read almost like a geography textbook. Apples first brought to this country by the early colonists were natives of southwestern Asia. Pears and quinces came all the way from Kashmir by way of western Europe. Peaches were cultivated in China more than 4,000 years ago. Damson plums get their name from Damascus. Our European plums were introduced to Hungary from Turkestan late in the 15th century. Japanese plums came from Japan in the 1870's. Improved dates came from Egypt in 1890.

The Spaniards brought with them many varieties of citrus and tropical fruits, which they had in turn borrowed from neighbors further east. Oranges came from China and Indo-China, olives from the Holy Lands, bananas from India, lemons brought west by the crusaders. Later, to improve our oranges, we brought in mandarin oranges from Japan.

From Mexico and Central America came the avocados. Pineapples taken from South America to Hawaii established a huge industry. Present

day strawberries are chance crosses between wild North American strawberries and those imported from Chile.

New immigrants from far away countries have frequently changed the whole complexion of agriculture in our country. The soybean brought from China and Manchuria has revolutionized Midwestern agriculture during the last 30 years. Today it is one of the major crops of cornbelt farms. Korean lespedeza was first harvested in this country in 1921. Today, in the South Central States, it has played an important part in building rich pastures on once naked, eroded cotton land.

For many years before the turn of the century, plant breeders looked for a grass that would resist the drouths of summer and extremes in temperatures in the central states. It was finally found in brome grass, introduced from Hungary and Russia.

Introductions of Dallis grass from South America in 1879 laid the groundwork for a new livestock industry in the humid climate of the Gulf Coast.

Today, much of the grazing industry of the north plain states is based on crested wheat grass. Drouth resistant, extremely winter hardy, and with the ability to withstand intense grazing, crested wheat grass is the first range grass ready for grazing in the spring. It was introduced in 1898 from Siberia.

More recently two new Italian immigrants, tre-

foil and ladino clover, have made history in grass-land farming.

Today, plant breeders are searching in Central America for new kinds of corn that will make hybrid corn more resistant to disease and insects, higher yielding, and more profitable to grow. At many experiment stations throughout the country, plant breeders have collected various strains and varieties of grasses, clover, vegetables, and fruit from the far-flung corners of the world. With so many different conditions existing in various parts of the world, scientists are learning that plants can be tailor-made for nearly any condition, anywhere.

Only recently a type of walnut sent back by a missionary in the Ural Mountains, has been crossed with our own Persian varieties. This new, hardy cross will allow Persian walnuts to be grown for the first time in the Midwest where formerly the trees winterkilled. It may well be that somewhere in the foothills of the Himalayan Mountains, the native home of the peach tree, there is a variety waiting to be found which could stand the rigorous cold of the north states.

Plant breeders have searched the globe from one end to the other to find adaptable strains and varieties. We certainly would not expect plants grown in the cool climates of Britain or Holland to do well in the dry, hot, arid regions of New Mexico or Arizona. Likewise, we would not expect plants taken from the barren land of the

Mediterranean or the Arabian Desert to be the best adapted to the rolling hills of Wisconsin.

Cattle

Let us look at our livestock for quite a different story. In America most of our beef cattle belong to three major beef breeds — Angus, Shorthorn, and Hereford. These all originated in the British Isles. Strangely enough, in many sections of the British Isles other English breeds are far more popular than the three we have.

We have one notable addition, the Brahman. It came from the hot, humid land of India. In America, the Brahman and its crosses have made possible a huge cattle industry along the Gulf Coast. Undoubtedly other breeds developed in the desert regions of the world could find a place in the arid Southwest where it is difficult for present breeds to exist.

There are five major dairy breeds. Three of these, Jersey, Guernsey, and Ayrshire, originated either in Britain or the islands off its coast. The two non-British breeds of cattle — Holstein and Brown Swiss — one a Dutch breed and the other Swiss, have been the basis of dairy farming for large sections of our country.

Just recently, Sindhi cattle imported from India have born crossbred heifers that have produced greater yields than their Jersey mothers in the hot, humid climate of Louisiana. This may well be the beginning of a new breed that will allow

efficient dairy production in the Gulf coast states and other semi-tropical regions.

Hogs and Sheep

It is a little different story with hogs. Of our eight major breeds, three are British and five have been produced at home by mixtures of early importations.

A recent importation of a Danish Landrace from Denmark laid the groundwork for the present popular Minnesota No. 1. There are many other good breeds of hogs in Europe. Why not see if these might be of value to our hog farmers?

Of the 13 major breeds of sheep, 9 are British. While we here in the Midwest generally think of British breeds such as Hampshires, Shropshires, and Suffolks as being the most important, the Merino from Spain and a French breed developed from Merino blood, called the Rambouillet, still make up the bulk of range sheep. These sheep graze on the arid mesquite ranges of the Southwest and the high, cold mountain ranges of our own Northwest and Canada — ranges where the British breeds cannot survive. The entire pioneer sheep industry which helped open up our own country was based on Merino type sheep.

In the Middle East we saw breeds of fat-tailed sheep, surviving on arid ranges where none of our breeds could survive. The fat-tailed breeds store up enough fat during the short, lush grazing season of the spring to carry them during the dry, hot

summer months when the range burns up. Some of these sheep might well have a place in the dry, arid ranges of New Mexico and Arizona where even our present day sheep cannot find enough to live on.

In the north country of Finland, in the high mountain regions of Tibet and Turkestan, sheep fend for themselves in the cold, severe climate. Perhaps these breeds could also prove themselves in the more mountainous regions of the northwest Rockies.

New Types of Animals

What may be of equal importance in the future is the development of new types of animals which can survive where our present day cattle, sheep, and goats cannot live. Whole tribes of Laplanders are able to survive in the far north because of the reindeer, which can live in the extreme cold and eat tundra mosses where no other domestic livestock could survive. Young reindeer meat is both tender and tasty.

Nomads in Tibet, living on the high, cold, bleak plateaus, migrate back and forth with their yaks which supply them with clothing, meat, and milk. The camel has long served as a beast of burden and even as a source of food to the desert tribes of the Middle East.

In the high Andes Mountains, the Indians have long used the llama as a source of food, clothing,

and power. The llama is ideally adapted to these high altitudes.

In this country we are at present in the process of actually domesticating fur bearing animals. Certain types of animals, such as deer or antelope, can survive in the desert regions better than any of our present day domestic animals. Our search for better livestock should certainly not be confined to the now existing types. We should search the globe for every possible type and breed that might stretch our own food supply. Every day there are more mouths to feed.

In Europe and the Middle East I was interested in the way that livestock breeders had developed particular breeds and varieties which are highly adapted to their environment. American visitors frequently are surprised at the large number of breeds of livestock they find there. While America has three major beef breeds of cattle, the British Isles have at least twelve major breeds and several minor ones. In Europe it seems that every area has a breed tailor-made for it.

It is the same story on the continent. Charolais, a province in France, is the home of the Charolaise cattle. Here, on the small, rolling pastures surrounded by hedges, these white cattle have grazed since the 18th century. In the beautiful countryside of Normandy graze the spotted Normandy cattle. Holland is noted for its fine Texel sheep and its black and white Friesland cattle. Brown

Swiss cattle efficiently change roughage into milk in the high Alps. Red Danes pasture in the small fields of Denmark. Danish Landrace hogs produce long, lean, meaty sides of bacon for the British market.

After looking at Europe's livestock, I can only conclude that we keep our breeds of livestock on too many different kinds of farms, under too many different climatic conditions. We have too often tried to make the same cow produce on the hot deserts of Arizona, the cold mountains of Montana, the rich, level cornbelt of the Midwest and the humid swamplands of Florida.

There is a reason behind our introduction of British breeds, generally to the exclusion of others. In the middle of the 19th century a fad swept across America that at times developed into a craze for the British breeds of livestock. Breed associations and herdbooks were established. Fantastic prices were paid for imported blooded stock. Everyone from the college professor to the farm leaders preached that the best was none too good and only the registered were the best. The newly formed breed associations began promoting their own particular breeds to the exclusion of all others.

Now there was nothing particularly wrong with the development in itself. It did emphasize, however, the value of British stock above most others, and frequently prejudiced the introduction of new breeds. Nor does it mean that there is any-

thing wrong with British breeds of livestock. They are very good. The British livestock breeders have spent much time and effort in producing them. But why stop with them? Why limit ourselves? Why not, like the plant breeders, search the globe to find the characteristics that will make the most efficient animals? One wonders what would have happened to modern day agriculture if the plant breeders had limited themselves to the same regions of the world for their plant material that livestock breeders have.

As our population increases, it will require more food for new, hungry mouths. Americans like meat and meat products. To keep up with this increased demand will require animals that are more efficient in turning feed into meat, milk, and eggs. It will also require more livestock and poultry. It is high time that we introduce new types of animals to see if we can find some that are more efficient producers and better adapted to the areas where livestock fail to thrive at present. Such a project would necessarily be largely conducted by the experimental stations throughout the country. There are a number of private breeders who are very much interested in trying new types in an effort to build better livestock production. So far, the experimental stations, research laboratories, and private breeders have been hamstrung by present disease control laws.

Today, disease control laws limit our search for new types of livestock. Our laws allow us to im-

port livestock from only a few countries of the world. We cannot even import directly from Britain. Animals must first be imported to Canada, held in quarantine, and then brought into the United States.

Few could argue that we do not need livestock disease control laws, or would recommend a haphazard importation of livestock from everywhere. It is certainly obvious, though, that present laws prevent us from importing what might prove to be very valuable livestock.

Let's look at it this way. If we had had the same laws in pioneer days, today we would have no Holstein, Brown Swiss, or Brahman cattle; no Rambouillet, Merino, or Karakul sheep; few, if any, breeds of goats. Even most of our present day breeds of hogs would not have existed since they originated from hogs brought in from China and other parts of the world now on the blacklist.

You may ask, aren't these regulations necessary? Would not such importations endanger the entire livestock industry? Certainly, regulations are necessary. Indiscriminate importations could bring in many dreaded diseases.

I think most scientists are thoroughly agreed, however, that by proper quarantine, isolation, and inspections such importations could be made. Such a program would necessarily require that animals be held for a period of time in isolation under rigid inspection by qualified scientists and veterinarians. For added protection, we could even quar-

antine them on off-coast islands. Only after it was absolutely certain that the animals were free from dangerous diseases should they be introduced. In some cases it might be necessary to hold the original animals and import only their offspring.

Bringing livestock into this country from Britain by way of Canada would seem to indicate that we think Canadian veterinarians are much smarter in detecting and halting diseases than our own veterinarians.

Let's look at the problem a little closer.

Many of our present laws are based upon our fear of foot-and-mouth disease that takes a heavy toll of livestock in other parts of the world. We are so frightened of the disease that until now no laboratories in our country were allowed to study it, not even on the islands off our coast.

Yet I visited foot-and-mouth disease laboratories in Britain, Switzerland, and France that had been in operation as long as 40 years. There had not been a single case of the disease having escaped from the laboratories. In the laboratory at Alfort, France, the disease has been under investigation inside the confines of the laboratory for twenty years. Within twenty yards of that laboratory is a dairy with 20 cows. During the twenty years, there has not been a single outbreak from the disease in that area. To me this is proof that by proper isolation, disease can be kept in isolation.

It is high time that we follow the path of the plant breeders and introduce new types of live-

stock with characteristics that our present livestock do not have. This would let farmers and ranchers extend their livestock production and produce more meat, milk and eggs for our increase in population.



Fig. 11—Brown Swiss cattle graze alongside a lake in Switzerland. In summer they graze above the timber line. Grass, cows, and trees all make their contribution to a balanced Swiss agriculture (Chap. 14).



Fig. 12—Landrace sheep grazing in the mountains of Norway. A strict disease control program keeps these flocks free of many of the contagious diseases which infest American livestock (Chap. 18).

North Countries Tackle Livestock Disease

“**W**E DON'T HAVE MUCH TROUBLE with contagious diseases here,” the young Norwegian veterinarian told me. “In the part of the valley I serve we have about 5,000 dairy cows and a much lesser number of hogs and horses. Horses are fast giving over to tractors.

“With the exception of vibrionic infection and mastitis in dairy cows, we have few contagious diseases in Norway.”

Later, Norwegian disease control officials told me that there had been no cases of brucellosis in Norway during the last year, and that within a short time even the last vestige of tuberculosis in cattle will be wiped out.

Scandinavians have either eradicated or kept out of their country a whole parade of contagious diseases that run rampant through the livestock herds and flocks in our own country. These include diseases like hog cholera, trichinosis, rhinitis, and vesicular exanthema in swine, Newcastle disease and fowl cholera in poultry, rabies in dogs.

Brucellosis, tuberculosis, and anthrax have been brought under strict control.

How do they manage it? Well, let's look at their disease control programs.

Just as in our own country, they have an effective tuberculosis program to eradicate the disease from their cattle. Today the disease is disappearing. Finland and Norway have gone a step further. They have control programs for avian type tuberculosis that infects both chickens and hogs. We have hardly started in this country on this control task.

Thirty years ago 80 per cent of the Danish dairy herds had tuberculosis. Today, for all practical purposes, tuberculosis doesn't exist in Denmark. It is about the same story in the two other Scandinavian countries. In order to erase the last vestige of the disease in Norway and Finland, the entire reacting herd is generally slaughtered, and control measures taken with the same precision that we used in America to eliminate foot-and-mouth disease.

Today American livestock men and health officials are becoming more and more concerned with the eradication of brucellosis. The Scandinavian countries several years ago rolled up their sleeves and went to work to get rid of this disease, not just half-heartedly control its spread. With the exception of a few states like Michigan, Minnesota, and Wisconsin, we have nothing in brucellosis control that comes anywhere near approach-

ing the effectiveness of the Scandinavian programs.

At the head of the list stands Norway. In 1935 there were 3,000 infected herds in Norway. In 1951 they did not have a single reactor. Finland had 4,000 herds infected with brucellosis in 1945. Five years later, less than 100 herds had reactors. This represented one reactor to every 8,000 head.

In 1938 Sweden started an intensive campaign to get rid of the disease. Around 50 to 70 per cent of the larger herds in the country were infected. The program, incidentally, carried out the recommendations of the leading research veterinarians in America.

Today, Sweden has around 370,000 dairy herds. Only 1,200 of them have brucellosis reactors. This is a little less than 0.4 per cent, or 1 herd out of every 250. Sweden hopes to have the disease completely eradicated in three or four more years.

During the thirties, 20 per cent of the herds in Denmark had infected animals. In some districts as many as 40 per cent of the dairy herds showed reactors on blood tests. The Danes have made slower progress than the other Scandinavian countries, but they still have reduced to 6 per cent the herds with reactors. In sharp contrast, about one herd out of every five in America, has brucellosis reactors, and about 1 animal in 25 has brucellosis.

There are no secrets in the methods these countries are using to get rid of brucellosis. With the exception of the ring test for milk, they use

the same weapons that we have known about for years. True, they are not faced with the problem of beef cattle. They have only dairy cattle. But their success still depends on the strong determination of these countries to get rid of the disease once and for all.

Since 1948 Finland has slaughtered all brucellosis reactors. In acute cases, abortion storms, the entire herd may be destroyed. They have used no vaccination since 1946. It is compulsory for farmers to test their herds when an abortion occurs on the farm. Ring tests on milk are run at all the dairy plants. In case of ring test reaction, the animals in the herd are given blood tests. Norway has about the same regulations, and they do not vaccinate either.

Sweden requires slaughter of reactors only in clean areas, but cattle cannot move from infected areas to clean areas. Infected cows must not be sold except for slaughter or into infected herds. Ring tests are made on all milk coming into the dairy plants to spot infected herds. This is followed up by blood tests of the individual animals in the herd if reaction is found on the ring test. Strain 19 vaccine can be used on permission, but actually very little vaccine is used in Sweden.

Denmark, too, uses the ring test three times a year on all dairy herds. Reactors may be removed all at once or gradually, depending on the number. Once 90 per cent of the herds supplying a dairy are clean, then the other 10 per cent of the

farmers must clean up their herds. Vaccination is used in Denmark, but only on permission from livestock health officials. Normally, permission to use vaccine is not granted except in herds that have had abortions, or if 20 per cent or more of the animals have positive brucellosis blood tests.

If a farmer keeps reactors in Denmark, he must keep them isolated. The law even requires him to keep the reacting animals at least three yards from his neighbors' land. If he pastures next to his neighbors' land, he must put up an additional fence three yards from the boundary fence. Dairies pay less for milk from infected herds. For many years these countries have required that skim milk or whey returned to the farm be pasteurized.

There is no hog cholera in any of the Scandinavian countries. Outbreaks have occurred, the last in Norway was in 1930. Sweden had a few outbreaks during the war. Both were quickly eradicated by disposing of the animals and quarantining the area.

Recently in America we had many widely scattered outbreaks of anthrax, particularly throughout the Midwest. It was thought to have been brought into the country in imported bonemeal. Left to their own, without national guidance, each state moved independently to stop the spread. But by then much of the damage had been done, and many new farms and new areas were seeded down with anthrax spores capable of living for 20 or 30 years in the soil.

Since Scandinavia must import much of its feed-stuffs from other countries, it, too, is in constant danger of introducing anthrax. A few outbreaks occur each year, but with this difference. These countries are prepared to stop the disease in its tracks and prevent the seeding down of anthrax spores in new areas.

How many times have you read in the papers of children being bitten by mad dogs? Far too many times! But you don't read about it in Scandinavian papers, for there is no rabies in the Scandinavian countries.

Dogs must be held in quarantine before they come into the country. While it has angered many movie stars, rich old ladies, and even a few ambassadors who insist on traveling with their pets, it has kept Scandinavia free of the scourge. Last year Finland had 27 dogs along the Russian border come down with rabies. It was thought to have been brought across the border by strays. The animals were disposed of and the disease stopped by compulsory vaccination of all dogs in the eastern section of the country.

It would seem that in most parts of America we prefer not to have compulsory vaccination of all dogs. We would rather wait until the children are bitten and then vaccinate the children.

Every year in America we have cases of trichinosis in our people. It comes from eating infected pork that is either raw or improperly cooked. We have tried to keep it under control by requiring

pork to be frozen and encouraging housewives and restaurants to properly cook pork before serving it. Scandinavia has tackled the problem from the other end. They require official inspection of the meat and compulsory cooking of garbage fed to hogs.

Today, we Americans have been greatly concerned with the possibility of foot-and-mouth outbreaks. We are all aware of the effective campaign waged against the disease in Mexico and more recently, during the outbreak in Canada. On previous occasions, we too, have eliminated the disease from our own country.

Southern and central Europe are hotbeds of infection. With infection running high in bordering countries, it is not easy for the north countries of Europe to control foot-and-mouth disease. About every three years the disease builds up in intensity in Europe. It is then that outbreaks are apt to occur in Scandinavia.

Finland recently had a new outbreak of foot-and-mouth disease. It will be wiped out by slaughtering infected herds and stopping the movement of livestock in a zone around the infection. A method similar to that has been used in America, Canada, and Norway.

When the disease starts building up in Germany, Sweden vaccinates the cattle in its southern province of Skaane. As single outbreaks occur, the infected herds are destroyed and an almost military control of livestock movement is slapped on in

the area. If the disease becomes widespread, they use a combination of vaccination and slaughter of infected animals, similar to the program used in Mexico.

Denmark, with a common border with Germany and many of its islands only a few miles from the continent, stands in constant danger of the disease by reinfestation. She tries to keep the disease down by controlled vaccination. While vaccination has lessened the severity, it cannot be said that Denmark has eradicated foot-and-mouth disease.

Why have these countries been more successful than we in keeping down infectious diseases? It is true that they have some advantage over us. Much of their livestock is kept in small herds and flocks. Few farms have the large number of cows, hogs, and poultry that you find on many American farms. Frequently the farms may be scattered and farther apart. This is particularly true in some parts of Norway and Finland. On the other hand, in Denmark and even parts of Sweden and Norway, you will find just as great a concentration of livestock as we have in areas like Wisconsin and New York. There is also a constant source of infection in nearby countries, some of which join their borders. Frequently in the north woods and in the mountains, the young stock run on common grazing grounds in the summer so that the cattle from many farms are mingled together.

These countries have the advantage that they

do not have the great movement of livestock that we have in America. Few animals go from one farm to another. When they do, it is generally only to another farm a short distance away. These countries do not have anything that corresponds to our salesbarns or large terminal markets like Chicago, St. Paul, Omaha, and Denver. Nor do they move livestock over long distances from one area to another as we do with feeder cattle, sheep, dairy cattle, and feeder pigs. Even the slaughtering is done in small, scattered packing plants rather than in great terminal centers.

While this may have made the job easier, it is not the whole story. The same operating conditions exist in parts of central Europe, yet disease runs rampant through these herds and flocks.

I think there is an important reason why Scandinavia has blazed the trail far ahead of us in disease control. When a new disease, like vesicular exanthema in hogs, comes along, the Scandinavian countries immediately jump on it. "Let's get rid of it," is their battle cry. We in America are more apt to sit back and say, "Oh well, they'll find a cure or a new vaccine for it."

It is true that our scientists have led the world in the development of vaccines and effective medications, but the tragedy is that a cure is only good after the animal has taken the disease. As we should have learned in recent experience with hog cholera vaccines, even the best of them is seldom, if ever, 100 per cent sure. The disease

continues to be a constant threat and constant cost year after year. The Scandinavians are more apt to look on these things as extra tools to exterminate the cause. We are more apt to look on them as a means of living with the disease.

In Scandinavia the job of disease control is done with surprisingly limited personnel. There are only 300 veterinarians in all of Finland, only 67 district vets directly responsible for disease control work.

Disease control laws differ in each of the four Scandinavian countries. Their greatest advantage over American laws is that they provide better central control and coordination. Most of the countries provide greater freedom in moving against an outbreak of any new disease not spelled out on the statute books.

Of even greater importance than the laws is the cooperation between farmers, dairy, and meat packing plants, and disease control officials. Since most of the dairy and meat packing plants are cooperatives owned by the farmers themselves, they have led the way in encouraging disease control programs.

Much of the burden for disease control is placed on the dairies and packing plants. All slaughter animals must be inspected by an official veterinarian and any disease reported at once to the disease control people. Under the Scandinavian slaughtering system, each animal is marked so the disease can easily be traced back to the farm from

where it came. This is one great weapon that disease control officials in Scandinavia have that our people do not. One of the quickest places to spot a disease outbreak is in the slaughter plant.

The Scandinavian extension people, along with the dairy and meat packing plants and farm organizations, have banded themselves together to educate themselves, as well as the livestock producers, of the dangers and control of contagious diseases. Compulsion has been of secondary importance. In Sweden even the local agricultural societies that direct local extension work have their own extension veterinarians.

Scandinavia has indeed done an outstanding job of disease control work. We could well copy their example and make America the healthiest place to raise livestock!

Summary

CENTURIES divide the peasant Egyptian farmer, turning with a heavy iron hoe the soil on a small plot of land he rents for an exorbitant price, and the modern American farmer plowing across his field with shiny new tractor.

On the farms of Europe and the Middle East are lessons that we can learn if we but take the time to look. The principles that apply to the farm economy in many a backward country are but a piled up effect of the same principles which operate in our own land. In other lands we see them accented.

Eighty-five per cent of the people in overcrowded southern Italy must make their living from the land. There are nearly 500 people for every square mile in Italy. Regardless of how well the Italian farmer may be able to farm or how much he can grow on every acre of land, there are just not enough acres to go around.

Land cannot continue forever to absorb surplus farm people. Here in America, and to a lesser degree in western Europe, surplus farm people have moved to the cities to work in offices and factories.

The first lesson we can learn from these crowded countries is that a modern, prosperous agriculture must depend upon an expanding industrial economy. Just as we cannot afford peasant agriculture in this country, so we can never hope to have prosperous farming in a country covered with dead factories. Economically as well as politically, we are Americans first, farmers second.

The people in the older parts of the world have roots deep in the traditions and history of their own communities. Frequently it is a lack of education that holds back the youngster from doing a better job of farming than his father or moving to a new region. He continues like his father, not necessarily because he doesn't want to do better, but because he doesn't know how to do a better job of farming. Uneducated, he would find it difficult to work at any other occupation.

A prosperous agriculture, as well as a prosperous country, depends upon mass education of its people. Educated farmers can change readily from one type of farming to another. They can adopt new farming methods, and when necessary they can change to another business to better their living standards. It is a lesson that we must not forget.

By now you are probably leaning back contentedly thinking, "My, we are really ahead of those foreign countries when it comes to education."

True, most of the younger people in some sec-

tions of our country graduate from high school. Many go to college. But when you examine our country as a whole, it doesn't look so good. What about your hired man who drifted up from the south? Any one of the northwestern European countries, like Holland, Scandinavia, or even Germany has less illiteracy than we; and when you consider the countries as a whole, they've done a far better job of mass educating their people.

I saw farms in Norway clinging to the sides of steep fjords. It would take these farmers nearly a half day to get over to their nearest neighbor's farm clinging to the other side of the fjord. Not much chance for education there? Guess again. On the more thickly settled areas, the school boat comes along. In the less densely settled regions, roving teachers go from farmhouse to farmhouse teaching the youngsters.

Over the past few years we have sent many agricultural experts to Europe to tell the European farmers better ways of doing things. This program has now been expanded under Point Four. There is little question that these programs of technical assistance have and will continue to help the farmers of other lands. But there should be a two-way bridge with information going both ways.

It is pretty easy to come to the point where we believe that all that is good must be in America; that there is nothing more that we can learn from anyone else. Self-satisfaction is always a dangerous philosophy.

The European farmer confronted with small acreages and not infrequently ungenerous soils, has learned to make the best use of the tools that he has had to work with.

An Englishman visiting this country once said, "I think your best farmers are better than our best farmers. But I think our average farmer is better than your average farmer." I tend to agree with him.

Using heavy applications of fertilizer and manure, as well as good soil management, the good European farmer gets tremendous yields. His livestock frequently out-produces ours. With today's high land prices and our increasing population, we could well tear this page from the European farmer's notebook. Farm account records in this country have definitely shown that profit is closely tied in with high yields of crops and livestock products.

With our hills and mountains covered with forest land, in the past we have been able to waste this vital natural resource and get by. If we are going to continue to have an adequate lumber supply, and what is equally important, a good living for farmers in areas where much of the land is in forest, we must start taking care of our forests. Here the farmers of Germany and Scandinavia are far ahead of us.

Today our attention is turned more and more to grassland farming. It is one way to use profitably much of our land too rough and sloping for

continuous crop production. Here again the European farmer is heads above us. I just haven't seen pastures in America like they produce in Europe. Faced with a shortage of protein feed, the European farmer gets much of his protein from his grass. We could well afford to send a delegation of American farmers to Europe to find out how to grow good grass.

There are also lessons we can learn from Europe on things that we do not want. Far too often these countries have settled into the comfortable habit of passing laws rather than getting down to the fundamental job of educating their people so that they may correct the evils themselves. These laws, adopted for the emergency of the moment, have continued to exist long after their original needs were forgotten.

At first it may look much easier to pass laws to enforce soil conservation or wise land use than head down what may look to be the rough road of education. Even in this country we have drifted farther and farther toward the idea "there ought to be a law." Yet these laws bring with them the arbitrary decisions and the handicaps on individuals which always follow when people try to use a single magic formula for solving all of their problems. Practices of soil conservation and even good land use differ widely from state to state and even from community to community.

We in this country are faced with the problem of choosing between the seeming expediency of

law and the longer, more permanent method of education. I vote for education.

Everywhere I have traveled, I have met young men and women who want to come to America. There was the student in Istanbul, the Arab refugee in Cyprus, the street urchin in Rome, the mechanic in Paris, the farmer's son in Holland.

When I asked them why they wanted to come to America, they all gave me the same answer. "There is opportunity there."

To me this is the essence of our greatness. This is the one thing we have that few other countries possess. Opportunity has been the very breath of America. Maybe we should call it the fifth freedom, "The freedom of opportunity."

We are still a new nation. It has been said that we work too hard, that we do not know how to enjoy ourselves. This, no doubt, is an outgrowth of the tremendous faith that we have in ourselves. If there is a job to do, let's do it, and in a hurry. During the war we said, "The difficult we do immediately, the impossible takes a little longer."

It is this drive, this urgency, that European countries seem to have lost. We can lose it too.

Sometimes I am disturbed at the parallel between the regulations that have been passed in this country in recent years and the creeping paralysis that slowly engulfed Great Britain and the other socialistic countries of Europe.

Today government has the power to tell your banker whether or not he can lend you money. It

can tell me what wage I can draw. It can tell the farmer how much he can get for a bushel of soybeans or a pound of beef.

Government has the power to tell the farmer how many acres of corn or wheat he can or cannot plant. It probably would be doing so if it were not for the Korean war. The irony of it all is that these regulations were written to meet the emergencies of depression.

We have learned that regulations, along with the inevitable bureaus to enforce them, continue to live on long after the emergency for which they were created ceases to exist.

All over the world young men and women dream of America because "there is opportunity there."

Let's keep that opportunity alive!