

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.