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Belgian Agriculture

by **LOUISE E. BUTT***

Belgium, a country normally less than 50 percent self-sufficient in foodstuffs and with a population density of over 700 persons per square mile, succeeded in maintaining itself very largely through its own resources of food and feed throughout World War II. Even though average consumption did not at any time rise above 80 percent of the prewar level, and though for large sections of the urban population it was never that high, the mere avoidance of widespread hunger could be counted an achievement.

Nevertheless, there is probably considerable justification in the claims which have been made that Belgian agriculture was capable of even greater expansion. Lack of boldness on the part of the authorities in planning and directing, coupled with an understandable resistance on the part of the farmers, no doubt prevented the full development of the country's food resources. Yet, in view of the natural bases, the traditions, and the historical development of Belgian agriculture, both producers and the Government achieved a substantial measure of success in raising food output during the war.

Belgium covers an area of some 12,000 square miles, roughly the same as the combined land area of Delaware and Maryland. According to the census of 1929, 7,360 square miles (4,700,000 acres) were in agricultural use. In the same year, 17 percent of the persons gainfully employed were reported to be engaged in agriculture and horticulture.

Topography and Climate

Belgium shares with the Netherlands the designation "Low Countries," but only a small part—the reclaimed lands near the coast and the northern border comprising less than 4 percent of the total land area—is really lowland, or below sea level. Another 40 percent of the country is less than 300 feet above sea level, and the remainder, well over half, reaches still higher elevations. The central part of the country rises from about 300 to 600 feet above sea level. The three southeastern Provinces of Luxemburg, Namur, and Liege range from about 600 to 1,300 feet in altitude.

The Belgian climate is on the whole maritime in character but is strongly modified by continental influences. The prevailing south-southwest winds bring humidity and moderate temperatures typical of an oceanic climate. Overcast skies, moist atmosphere, and copious fog are characteristic. East winds, however, are not infrequent. They sharpen the cold in winter, intensify the heat in summer, and clear the skies.[1]

The northwestern Provinces, which are nearest the sea and lowest in altitude, are in general milder than the others. Temperatures average 61° F. in summer and 37° in winter. The average frost-free period is from the beginning of April to the middle of November. Middle Belgium averages 2° warmer in summer and 2° colder in winter. Its frost-free period extends from the end of April to the first week of November. The Campine in the northeast and the Condroz and Ardennes regions in the southeast have more rigorous climates. Summer temperatures average 63° in the Campine and 62° in the Ardennes, and winter temperatures average, respectively, 33° and 30°. On the average, no frost occurs in the Campine between the end of the first week in May and the third week in October and in the Ardennes between mid-May and mid-October.

Precipitation is normally plentiful over the whole country. In upper Belgium it is considerably heavier than in the central and lower regions, or in the Compine, where it averages some 30 inches annually, compared with 40 to 50 in the higher areas to the south.

Agricultural Regions

Belgium has been divided for agronomical purposes into nine main agricultural regions (fig. 1). Minor variations of soil, or topography, within some of the larger regions set off certain areas. These are sometimes designated by name but are not indicated on the map.[2]

The natural characteristics that distinguish the several regions also determine the prevailing type of agriculture. Most of the official statistical data, however, are compiled by Provinces. Since the Provinces, in most cases, are not closely related to the agricultural zones, it is important

*Office of Foreign Agricultural Relations.

[1] For a fuller discussion of Belgian climate, see (*2, pp. 46–51*) and (*5*). Italic numbers refer to Literature Cited, p. 98.

[2] For fuller discussion of the agricultural regions of Belgium, see (*1, 4, 5, 7, 10*).

when consulting the statistics to keep in mind regional variations within the Provinces.

THE DUNES

Along the North Sea a narrow strip of dunes with an area of about 15 square miles extends from the Dutch to the French border. The dunes vary in width from a few yards to more than a mile and are for the most part between 25 and 40 feet high, although higher altitudes are reached. The topography is uneven. On the heights, grass anchors the sand against the wind, and only in the depressions is any agriculture feasible. Market gardening is the principal type of agriculture. Farming is on a small scale and often a part-time enterprise for the fishermen of the region.

THE POLDERS

Adjacent to the dunes and to the Dutch border as far as the Escaut (Scheldt) estuary is a narrow region of low-lying, heavy clay soil, covering an area of 375 square miles. This is called the "polder" region, meaning land lying below sea level and drained mechanically by pumps, the excess water being forced to the sea through a system of canals. The soil is clay, compact and wet, and extremely difficult to work. After copious additions of lime, stable litter, and other agents the rich soil is light enough to produce most of the major crops. Pastures are extensive, and dairying and fattening of cattle are important.

FLANDERS SAND

The rest of the northern part of the country, comprising a large section of East and West Flanders, nearly all of Antwerp, northern Brabant, and the greater part of Limburg, is divided into two regions of sandy soil. The area west of the Escaut River, about 400 square miles, is known as the region of Flanders Sand. The soil is a fine, diluvial sand, of considerable depth. The farmers for centuries have been fertilizing the soil with any organic material at their disposal and have not only made the area highly productive but have substantially increased the amount of humus in the soil. As a result, it is heavier and richer than in its natural state and capable of producing a greater variety of crops.

Flanders is known for its long tradition of careful husbandry. It is a region of small holdings, where a dense farm population supports itself by a highly intensified agriculture. Hand labor is not uncommon, machinery is in little use, and the horses used for draft power are somewhat lighter than the typical Belgian farm horse. The temperate climate and the light soil have both favored the intensive exploitation of the land, making it possible to work in the fields the year round. Partly in the light sandy region and partly in the loam belt is to be found most of the acreage producing the important specialty crops for which Belgium is known.

THE CAMPINE

East of the Escaut and extending to the Dutch border is the Campine, a sandy area of more than 1,700 square miles. Its soil is coarser than that in Flanders; it is mixed with glacial deposits of gravel and underlaid with a thin hardpan. In dry weather any moisture in the light shallow sand is quickly evaporated. In wet weather the impermeable hardpan holds the water, which forms pools and bogs on the surface of the land. Until recent times this was one of the least productive areas in the country. At present wide areas of uncultivated moorland are still to be found, but modern methods of cultivation have succeeded in bringing much of the former wasteland of the area under some form of agricultural exploitation. Industries based on the natural resources of the region (coal mining, metallurgy, cement works) have absorbed much of the once agricultural population, which now frequently makes of farming a part-time occupation. Farms are small and mainly self-sustaining.

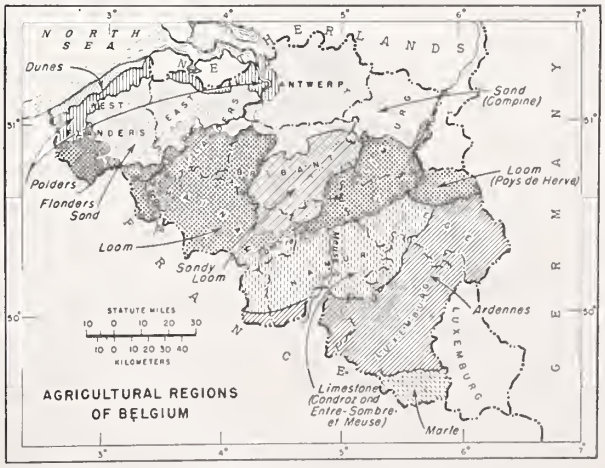

FIGURE 1.—Reference map.

SANDY LOAM AND LOAM REGIONS; PAYS DE HERVE

South of the Campine and the sandy region of Flanders the land rises gradually to the rich belt of loam soil extending through the center of Belgium from the French to the German-Luxemburg border and as far south as the Sambre and Meuse Rivers. This is "Middle Belgium," the main staple-crop-producing section of the country.

Within the belt are variations in soil and topography, which distinguish certain parts. An area of some 900 square miles, covering roughly the southeast half of Brabant Province and extending into Hainaut and Namur, is the so-called Sandy Loam Region, intermediary between the poor sands of the Campine and the true Loam Region to the east and west. In the neighborhood of Brussels the farms are small enterprises, specializing in market gardens, fruits and flowers, hothouse produce, and dairy products. Farther away from the urban centers the farms are larger and are devoted to crops that a rather poor soil will produce.

The eastern extremity of Middle Belgium, bordering the Dutch Province of Limburg, and known as the Pays de Herve, is distinctive for its almost exclusively livestock economy, which both soil and topography favor. The section is hilly, with outcroppings of limestone through the clay-loam soil on the hills that are otherwise carpeted with rich grass. Croplands are virtually nonexistent, but many fruit orchards are found.

The rest of this wide fertile belt is the Loam Region proper. Its expanse of approximately 2,700 square miles, almost a quarter of the country's area, takes in important sections of Hainaut, Liege, East and West Flanders, Limburg and lesser sections of Namur and Brabant.

The farms in this zone are relatively large. Nearly every commune has one or more farms of from 100 to 250 acres. Around these the smaller farms are clustered. In the busy seasons, workers from the smaller farms in the section and from distant parts of the country are engaged to help with the work on the large estates. The small farmers of the region may have year-round employment on the large farms, or work in the industrial centers of the area, while cultivating their own lands as a part-time occupation or with the help of other members of the family.

A varied topography, together with considerable variation in soil types, is reflected in a diversified agriculture, which adapts itself to local conditions and forms a variegated pattern over the area. Horse breeding is the outstanding type of livestock enterprise, but cattle raising is an important adjunct to crop production.

LIMESTONE REGION

The Sambre-Meuse River Valley marks the northern boundary of the Limestone Region, a plateau some 25 miles wide, lying between Middle Belgium and the forests and mountains of the Ardennes. The region is divided into two nearly equal parts by the deep cleft of the Meuse River Valley in its northward course from the French border to the town of Namur. To the east of this line the region bears the name "Condroz"; to the west it is called "Entre-Sambre-et-Meuse."

Through the region run alternate bands of thin, rocky, unproductive soil, and fertile calcareous loam. Farms are large, producing grain, sugar beets, and pasture crops. Fruit growing is important west of the Meuse, a good market being found in the industrial towns along the Sambre. Livestock raising is important over the whole region. In many respects the good agricultural land of the section resembles the adjacent Loam Region. But the rugged terrain, the many unproductive, or forested, tracts of land, and the cooler climate give a distinctly different aspect to the zone as a whole. It contrasts with both Middle Belgium with its gentler contours and the more barren, mountainous region of the Ardennes arising steeply to the south.

THE ARDENNES

This country of mountains, plateaus, forests, and moors, of heavy rainfall, bitter winters, and short cool summers was until recent times a barren and unproductive region where only primitive methods of agriculture were known. Since the latter part of the nineteenth century, great changes have taken place. The use of commercial fertilizers has improved the production of food and forage crops and of pastures, which, together with better feeding methods, has been reflected in the number and quality of the livestock of the area. It may now be favorably compared with the more naturally productive areas of the country, in both the quality of its produce and the prosperity of its peasants. Cooperative enterprise and modern methods of caring for the commercial grazing lands have been important factors in

bringing about improved conditions, particularly in putting its chief agricultural enterprise, livestock raising, on a profitable basis. The farms are of moderate size and owner-operated. The greater part of the crop and pasture land is in farms having an area of less than 50 acres.

THE MARNE

At the southeastern extremity of Belgium is an area of some 365 square miles, with an uneven topography and wide range of soils. Bands of heavy wet clay, too dense for cultivation, are devoted to pasturage; on the poor sandy soil of other localities some rye and potatoes are produced; and on the better soils grain and beets are grown. Fruit is produced along the French border. A large part of the area is wooded, because the soil is too thin or the terrain unfavorable for cropland or pasture. For some time the tendency in the region has been toward animal husbandry and away from the less remunerative production of field crops.

Land Use

The pattern of land use clearly shows the importance of livestock production in Belgian agriculture. In the period immediately before World War II, 75 percent of the agricultural land was devoted to the support of the livestock population. Nearly 40 percent was in permanent meadows and pastures; over 10 percent in rotation meadows and feed roots, not including catch crops; and roughly 25 percent in grains, legumes, and potatoes utilized as feed. Six percent of the total agricultural area was planted a second time during the growing season to produce an additional crop of feedstuffs. The acreage devoted to grains and legumes used for food, together with the sugar beet, potato (for food), and vegetable acreage, amounted to less than 15 percent. Industrial crops, predominantly flax, and fruit orchards, nurseries, flowers, etc., occupied the remaining 10 percent of the agricultural land.

The emphasis on feed production is in general characteristic of all the Belgian Provinces (table 1). Various feedstuffs are all grown over the whole country but with varying importance from section to section. More than half the permanent and rotation meadows are in the plateau regions of Liege, Luxemburg, and Namur; 70 percent of the pastures are also in this area and farther west in Hainaut and West Flanders. Two-thirds of the feed roots are grown in the loam-soil regions

TABLE 1.—*Acreage in principal crops in Belgium, by Provinces, average 1936–38*

Item	Antwerp	Brabant	West Flanders	East Flanders	Hainaut	Liege	Limburg	Luxemburg	Namur	Total Belgium
	Acres	*Acres*	*Acres*	*Acres*	*Acres*	*Acres*	*Acres*	*Acres*	*Acres*	*Acres*
Wheat	3,892	84,697	66,726	41,931	93,334	44,521	26,880	16,306	47,975	426,262
Spelt	7	40	7	50	769	729	10	9,612	13,704	21,928
Maslin	32	126	12	551	640	42	89	3,390	203	5,085
Rye	62,591	56,399	54,912	100,492	14,614	6,227	53,407	19,548	12,143	380,333
Barley	623	9,575	13,922	5,893	14,957	11,354	1,819	7,384	13,035	78,562
Oats	26,109	70,022	89,439	40,443	74,104	53,762	40,681	68,070	64,912	527,542
Buckwheat	30	96	72	99	5	613	59	69	81	1,127
Total grains	93,284	220,955	225,090	189,459	198,423	117,248	122,945	124,379	152,056	1,443,839
Field beans	180	2,209	10,633	1,522	1,851	890	160	539	2,481	20,465
Peas	1,196	3,086	8,350	2,525	15	190	77	74	183	15,696
Total dry legumes	1,376	5,295	18,983	4,047	1,866	1,080	237	613	2,664	36,161
Potatoes	63,454	55,967	63,451	79,454	26,685	16,974	22,447	32,035	22,738	383,202
Sugar beets	682	18,006	18,600	3,311	25,622	25,447	14,194	----------	13,563	119,425
Flax	344	2,246	38,573	15,298	9,813	1,507	91	57	4,900	72,829
Chicory	----------	52	11,745	937	553	7	10	----------	101	13,405
Tobacco	----------	89	2,486	608	1,428	----------	----------	524	964	6,099
Hops	----------	432	1,451	235	----------	----------	----------	2	----------	2,120
Colza	15	12	5	74	----------	----------	20	----------	2	128
Hemp	----------	10	----------	94	----------	----------	----------	----------	----------	104
Feed roots	18,214	34,755	32,771	36,134	39,057	13,628	16,282	9,007	20,826	220,674
Rotation meadows [1]	14,431	46,604	19,094	32,309	34,676	21,458	12,446	56,216	64,922	302,156
Permanent meadows	75,352	48,180	32,796	42,136	79,429	108,565	50,459	106,458	90,887	634,262
Catch crops (fodder) [2]	59,349	34,058	60,308	105,637	2,612	7	18,024	77	57	280,129
Pastures	69,088	86,222	162,073	87,467	205,781	180,626	65,609	141,568	127,246	1,125,680
Orchards	4,100	24,463	11,918	27,231	19,736	47,545	27,626	6,286	14,933	183,838
Total [3]	340,340	543,288	639,036	518,794	643,069	534,082	332,366	477,145	515,802	4,543,922

[1] Clover, alfalfa, sainfoin, timothy, ryegrass, and mixed leguminous fodder.
[2] Fodder beets and carrots, spurry.
[3] Does not include catch crops and market gardens.

Compiled from data published by the Belgian Ministry of Agriculture.

of the middle and low Provinces of Brabant, Hainaut, and the two Flanders. The highly intensified agriculture of Antwerp and East and West Flanders accounts for 80 percent of the important second, or catch, crops. These consist of fodder beets, spurry, etc., which are planted after the rye is harvested. They mature during the autumn and are used for winter feed.

The grains, potatoes, and dry legumes that are so largely produced for feed in Belgium also vary in importance from Province to Province. In the sandy soils of the northern Provinces of Flanders, Antwerp, Brabant, and Limburg rye and potatoes predominate. The more loamy, higher areas of Brabant, Hainaut, Flanders, and Liege produce most of the wheat. Barley is found through the central loam section of the country in West Flanders, Hainaut, Liege, and Namur. Oats also grow mainly in this area but extend northward into the sandy loam of Brabant and southward into Luxemburg. The once-important spelt and maslin crops, now occupying about 2 percent of the total grain acreage, are produced chiefly in Namur and Luxemburg.

The principal sugar-beet area is in Middle Belgium, the Provinces of Hainaut, Liege, and Brabant having over 55 percent of the acreage, and another 15 percent is in West Flanders. The small industrial crops are concentrated heavily in Flanders, especially in West Flanders, which has over 85 percent of the chicory and nearly 70 percent of the hop acreage. In Flanders also are more than three-fourths of the flax and 50 percent of the tobacco fields of the country.

Livestock

Concentration upon animal husbandry has long been traditional in Belgium. As early as 1846, over 50 percent of the agricultural land was devoted to the production of feedstuffs (*3, p. 10*). The census enumeration of that year indicates that the number of cattle and milk cows per acre of land so used was almost the same as the 1936–38 average. The number of cattle per 100 people was 27 in 1846 as compared with only 20 in 1936–38. The decline in relative number of animals, however, was much more than offset by a marked increase in productivity per animal.

In spite of the emphasis placed on feed production in Belgium, the support of the prewar livestock population and the annual output of livestock products would not have been possible without substantial imports of feedstuffs. In the latter 1930's, imports of feed grain averaged over 1,000,000 short tons; oil-cake imports, or the equivalent in oilseeds, came to over 450,000 short tons; and other feedstuffs, mainly bran, of which a substantial part was derived from the milling of imported wheat, averaged about 350,000 short tons annually. In terms of caloric value, roughly half the total output of livestock products is estimated to have been produced from imported feeds. Imports, moreover, accounted for an even larger share of the protein requirements of Belgian livestock.

CATTLE

The total number of cattle in Belgium in the years just preceding World War II exceeded 1,700,000, of which 975,000 were dairy cows. (See table 2.) This indicated almost as many per 100 acres of agricultural land as in the Netherlands, where grassland is richer and more extensive.

In general the small farms of less than 10 acres, which predominate in all Provinces and are especially numerous in the north, keep one or two milk cows. Two-thirds of the total number are found on farms of less than 25 acres. The larger farms engage in the raising of young stock and the fattening of cattle.

Cattle breeding has not advanced so far in Belgium (*6, pp. 458–461, and 9*) as in Denmark and the Netherlands. Breeders have practiced systematic selection only since the turn of the century and so far have developed no single highly bred, or uniform, strain. At present six general

TABLE 2.—*Livestock numbers in Belgium, by Provinces, average 1936–38*

Type	Antwerp	Brabant	West Flanders	East Flanders	Hainaut	Liege	Limburg	Luxemburg	Namur	Total Belgium
	Number	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*
Horses, farm	20,527	37,955	35,094	31,315	43,655	24,879	19,079	22,562	29,006	264,072
Milk cows	99,804	116,551	113,779	138,504	130,271	154,535	77,888	75,471	66,965	973,768
Total cattle	151,338	176,428	235,786	244,292	231,740	253,140	126,221	162,923	145,651	1,727,519
Sows	2,193	11,575	34,368	18,476	4,713	18,732	16,935	15,254	4,323	126,569
Total pigs	66,336	118,784	172,962	145,579	65,427	151,229	91,584	97,197	53,037	962,135

Compiled by the Office of Foreign Agricultural Relations from data published by the Belgian Ministry of Agriculture.

types may be distinguished. The most numerous are the so-called "blue" Belgian cattle, which are actually the result of crossing the original native stock with the English Shorthorn and the Dutch Friesland and Ijssel cattle. They are dual-purpose cattle, good for both beef and milk production, and are found throughout Middle Belgium. The red Flemish cattle, found around the French border, are good milk animals. Crossed with the Shorthorn, they have been developed as a dual-purpose type, called Furnes-Ambacht because of having been bred in the locality of that name in West Flanders. This breed is numerous also throughout East Flanders. In the Condroz and Entre–Sambre–et–Meuse region, the native cattle have been crossed with the Shorthorn to produce a good meat animal with a satisfactory milk yield. The Pays de Herve is the main center for the black-and-white milk animals which are a cross between the Friesland cattle of Holland and a closely related native type.

In the Campine both black-and-white and red-and-white cattle are found, again the result of crossing with the similar Dutch types. They are predominantly milk animals. In the Ardennes, finally, small native cattle have been crossed with foreign breeds to produce an acceptable, if not outstanding, type of dual-purpose animal.

HOGS

Hog numbers in Belgium averaged 950,000 in the years 1936–38, placing Belgium next after Denmark, the Netherlands, and Germany in number of pigs per unit of agricultural land. Hogs are found on all except the smallest holdings in the country but are most numerous in the sandy soil regions of the Provinces of East and West Flanders, Antwerp, and Brabant. Most of the breeding is done by farmers having only one or two sows, the general custom being to market the small pigs that cannot be raised on the produce of the farm. Many small farmers who do not keep breeding sows buy each year a pig or two for fattening for their own use and/or for sale. A modern development has been the purchase of small pigs for feeding by the creameries whose byproducts can thus be put to profitable use.[3]

The Belgium hog is typically large and fat, the result of crossing the native breed with the Middle White. While this type is favored by the rural population, a growing demand on urban markets for a leaner product is reported to be effecting a gradual increase in the production of a leaner hog.[3]

HORSES

Horse breeding (*8*) is the outstanding accomplishment of the Belgian livestock industry. The thoroughbred Belgian horse is renowned over the world for its massive, compact, and powerful frame and its outstanding performance as a work horse. It is purely a Belgian product, produced through the selection and crossing of the best lines of the ancient Brabant race. The development of the breed was accomplished in the last century. By 1900 it had begun to produce world champions. The number of horses in agricultural use in Belgium averaged over 260,000 in 1936–38, about the same number per acre of farm land as in the Netherlands. Horses for other purposes numbered under 50,000. Some 10,000 "Belgium" horses per year were exported before the war.

OTHER LIVESTOCK

Sheep production has been relatively unimportant for many years. A sharp rise in numbers occurred during World War II, but the basic conditions of Belgian agriculture do not favor a continued increase, and numbers will probably gradually decline to around the prewar level of under 200,000 head. Goats have been of small importance for many years, and during the recent war numbers were considerably reduced from the prewar figure of some 150,000.

Chickens are among Belgium's most important sources of farm income. Laying hens numbered 14,000,000 in 1935. Numerous in all parts of the country, they are especially so in East and West Flanders and Hainaut, where over half the total number of laying hens were kept, according to the 1929 census. The Leghorn is the preferred hen on the farms where most of the poultry is raised. Large-scale commercialization has not yet developed.

Crop Production

FERTILIZER USE

Crop yields in Belgium are among the highest in the world. This has come about mainly through the intensive use of chemical fertilizers, although,

[3] REED, H. E. HOGS IN BELGIAN AGRICULTURE. U. S. Bur. Agr. Econ., F. S. 68. 12 pp., illus. Washington. 1937. [Processed.]

TABLE 3.—*Production of principal crops in Belgium, by Provinces, average 1936–38*

Item	Antwerp	Brabant	West Flanders	East Flanders	Hainaut	Liege	Limburg	Luxemburg	Namur	Total Belgium
	Short tons	*Short tons*	*Short tons*	*Short tons*	*Short tons*	*Short tons*	*Short tons*	*Short tons*	*Short tons*	*Short tons*
Wheat	4,817	99,131	88,758	51,302	120,924	54,553	29,630	16,094	53,142	518,351
Spelt	11	33	11	55	794	672	----------	9,392	12,963	23,931
Maslin	33	132	11	672	628	33	77	3,042	176	4,804
Rye	65,565	57,640	54,168	121,375	16,424	6,052	49,174	18,078	11,012	399,488
Barley	606	11,409	18,761	7,694	18,982	12,809	2,116	6,834	14,143	93,354
Oats	26,654	88,075	121,838	51,996	95,416	66,965	41,623	64,265	65,775	622,607
Buckwheat	22	66	55	55	----------	529	22	55	44	848
Total grains	97,708	256,486	283,602	233,149	253,168	141,613	122,642	117,760	157,255	1,663,383
Field beans	187	1,918	12,357	1,698	1,775	805	154	562	2,513	21,969
Peas	1,168	2,028	10,395	3,097	11	220	55	44	165	17,183
Total dry legumes	1,355	3,946	22,752	4,795	1,786	1,025	209	606	2,678	39,152
Potatoes	692,438	427,509	620,282	757,178	263,739	139,597	195,142	223,427	198,791	3,518,103
Sugar beets	8,951	222,612	236,093	38,570	321,721	321,169	173,614	----------	172,379	1,495,109
Flax (seed)	88	496	8,807	4,718	2,227	419	22	11	1,378	18,166
Flax (fiber)	540	4,894	99,263	37,633	23,799	3.175	187	121	12,522	182,134
Chicory	----------	452	169,039	11,288	6,934	88	99	----------	1,091	188,991
Tobacco	----------	66	2,987	551	1,312	----------	----------	364	816	6,096
Hops	----------	287	904	132	----------	----------	----------	----------	----------	1,323
Colza	11	11	----------	55	----------	----------	11	----------	----------	88
Hemp (seed)	----------	----------	----------	33	----------	----------	----------	----------	----------	33
Hemp (fiber)	----------	11	----------	132	----------	----------	----------	----------	----------	143
Feed roots	510,833	912,306	1,294,885	1,161,494	1,247,265	495,037	505,057	263,331	801,380	7,191,588
Green clover	1,830	45,757	2,844	15,785	79,157	7,330	7,970	5,776	24,130	190,579
Rotation meadow hay [1]	23,865	67,550	52,305	58,632	54,531	35,417	19,996	95,659	131,825	539,780
Catch crops [2]	476,904	276,217	995,266	1,269,532	20,690	55	82,475	1,687	485	3,123,311
Permanent meadow hay	142,606	88,912	80,028	81,196	156,517	224,618	88,064	191,494	172,688	1,226,123

[1] Clover, alfalfa, sainfoin, timothy, and ryegrass hay.
[2] Fodder beets and carrots, spurry.

Compiled from data published by the Belgian Ministry of Agriculture.

even before their use was general, certain areas of Belgium had developed excellent crop yields through the assiduous use of organic fertilizers. Today the use of such fertilizing agents is still of the first importance. Farm manure is applied to the land every 3 to 5 years, or annually on the lighter soils, in quantities averaging some 7,000 pounds per acre per year (*10*). The census of 1929 reported the annual use also of sludge and city refuse amounting to nearly 5,000,000 tons, or, per acre of agricultural land, well over a ton. But probably of greatest importance is the application of chemical fertilizers, of which Belgium uses more than any other country except the Netherlands. Amounts utilized, in terms of plant food per acre of land in agricultural use, according to estimates based on the census returns of 1929, came to some 20 pounds of nitrogen (N), 30 of phosphoric pentoxide (P_2O_5), and 20 of potash (K_2O).

CROP OUTPUT

Wheat appears as one of the principal crops of the country. Production in the 3 years 1936–38 was over 500,000 short tons per annum (table 3). Average yields of 40 bushels per acre were achieved in the 15 years 1924–38. In recent years wheat yields in Belgium have been surpassed only by those of Denmark and the Netherlands.

Rye production averaged 400,000 short tons in 1936–38, with yields per acre higher than in any other country. Average yields between 1924 and 1938 were 38 bushels per acre.

Barley output is relatively small, the annual average for 1936–38 having been less than 95,000 short tons. In yields per acre Belgium was second only to Denmark and the Netherlands, the average for 1924–38 having been 49 bushels per acre.

The largest grain crop produced in Belgium is oats. Total output in 1936–38 amounted to more than 600,000 short tons. The yield per acre of over 70 bushels was equal to that of Denmark and surpassed that of the Netherlands.

The remaining grains produced in Belgium—spelt, maslin, and buckwheat—are of minor importance, their total output in 1936–38 having been approximately 30,000 short tons.

Potatoes are among Belgium's most important crops. Production before the war was officially estimated at over 3,500,000 tons. No other country had as consistently high yields per acre as Belgium. The sugar-beet output of almost 1,500,000 tons also represented one of Belgium's principal crops, providing the basis for the important sugar industry of the country. Unit yields for sugar beets, however, were below those of Denmark, the Netherlands, Sweden, and Switzerland.

Of the specialty crops produced, flax and chicory were the most prominent, with tobacco also of some, though minor, importance. Relative to total area, Belgium had the largest fiber-flax output of any European country (excluding the Soviet Union), and even in absolute terms occupied fourth or fifth place during the 10 years preceding World War II. In 1938 Belgium produced more flax than any other country, except Poland and the Soviet Union. Only the Netherlands had higher average yields per acre.

Among the fodder crops, outstanding yields are achieved in Belgium for mangels, the most important of the root crops. Yields of 30 short tons per acre are average. Total output of fodder roots, including the catch crops which are principally fodder turnips or rutabagas, exceeded 10,000,000 short tons in 1936–38. The production of green clover was not significant, but that of clover, alfalfa, and other hay, including meadow hay, amounted to 2,700,000 tons a year.

Food Output and Self-Sufficiency in Food Supplies

Before the war about half the food supply of Belgium, measured in calories, was imported, if livestock products produced with imported feeds are counted as imports. Eighty percent of the bread grain was imported, about two-thirds of the dry legumes, and 10 percent of the sugar. Potatoes, other vegetables, and fruits, except citrus fruits, were in general produced in sufficient quantities to meet requirements, seasonal and local factors resulting in some imports and exports. Average production for food of the commodities just named in the prewar period 1934–38, is indicated in the following figures:

	1,000 short tons
Bread grains	300
Potatoes	1,400
Sugar (refined)	225
Dry legumes	10
Vegetables	450
Fruits	300

Only relatively minor net imports of livestock products, mainly of meat and cheese, were needed to supplement domestic output, and these were offset to some extent by exports of eggs. But any measure of the country's self-sufficiency in these products should take into account the output of livestock products made possible by the use of imported feeds. This can only be approximated, but estimates indicate that at least half the total output of food of animal origin measured in terms of calories was based on imports of feedstuffs.

The following figures summarize the total production of the principal animal foodstuffs in Belgium before World War II:

	1,000 short tons
Meat, including poultry and rabbit	370
Milk for fluid consumption	700
Butter	70
Cheese	30
Eggs	115

Statistics of agricultural production during the war cannot be compared in detail with those for prewar years, partly because of changes made in methods of compilation, partly for the obvious reason that the efforts made under enemy occupation to exert strict controls resulted in considerable falsification of production data. Estimates have been made, however, which having made allowance for such bias, may serve to indicate in a general way the trend in food output and its relation to total food supplies during that period. No less indicative of the efforts made to increase food output during the war are the figures for production in the two seasons since its close. It is true that the harvest of 1945 was one of the worst in many years, largely on account of the weather. Part of the decline in production, however, may be attributed to the relaxation of wartime controls and renewed emphasis on livestock, as against crop, output. Figures for 1946 (preliminary estimates) clearly show the strengthening of this trend in Belgium's food production:

	Billion calories	*Percent of 1934–38*
1934–38 average	3,600	100
1943–44	5,650	156
1945–46	3,450	95
1946–47 (tentative)	3,750	104

Wartime increases in food production were achieved principally through an increase in wheat production and an increased utilization of wheat and rye as food at the expense of feed. A significant contribution was made also by the development of rapeseed production, hitherto insignificant, which helped to ease the shortage of fats. As much as possible, the dairy stock was spared, numbers declining by only about 20 percent. With the scarcity of feed concentrates, milk yields dropped to some 80 percent of the prewar average. Pigs

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and chickens were more drastically reduced in numbers, and for all types of meat animals the average slaughter weights were decreased.

Agricultural Policy

Agriculture in Belgium normally aims at producing the high-value products of intensive farming largely for domestic consumption, at exporting some quantities of a few specialties, and at importing the feedstuffs necessary to the maintenance of its livestock industry and the bread grains which, because of natural and economic factors, are more cheaply imported from abroad than raised at home.

Economic advantage has determined this general pattern for agriculture as well as its place in the country's whole economy. For Belgium, which is primarily an industrial country, it has not been to the general advantage to support a high degree of self-sufficiency in food output in normal times. Protection for agriculture was virtually abandoned in the 1880's. Farmers' demands for higher or more remunerative prices have been countered by demands for lower living costs on the part of the urban industrial population. Governmental policy, in simple terms, has been aimed at keeping a stable wage-price relationship in the interest of the industrial workers. This has entailed a policy of low food costs, resulting for the farmer in unremunerative prices for many items of low cost on the world market.

This general policy was tempered by the crisis and the events following the crisis of the early 1930's. In this period the pressure of low world prices even on the products Belgium could produce most advantageously was such that aid to agriculture in the form of subsidies and import restrictions became a definite Government policy and has remained so. Support was offered even to the grain producers, for example in the regulations governing the percentage of domestic wheat to be used in milling.

Official wartime policy in regard to agriculture had to follow radically different lines from those pursued in normal times in order to increase the output of food and especially of bread grains. To this end acreage plans, obligatory delivery quotas, and price incentives were used. Since the close of the war a reversion to prewar policy is apparent, although the difficulty of securing bread grain on the world market has necessitated some measure of continued control over grain production and utilization in Belgium. Price incentive to grain growers and compulsory deliveries at least of wheat thus remained in effect. But the trend toward increased output of livestock products, even at the expense of bread-grain supplies, has not been hindered by Government measures, which have rather encouraged the feeding of grains other than wheat and have subsidized high prices for hogs, beef cattle, and dairy products. Measures of this type, while more than normally drastic in character, appear to indicate a continuation of the Government's prewar policy of maintaining a remunerative level of return for the producers of Belgium's typical agricultural products, while assuring, through subsidies if necessary, a lower price level for domestic consumers.

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Chinese National Policies Affecting Agricultural Trade

by **A. B. LEWIS***

Chinese trade-control policies affect the Chinese market for United States agricultural products and the supply of Chinese agricultural products for United States consumption. These policies have been exceptionally fluid since the close of the war with Japan. An understanding of the underlying causes of past activities in this field is important. Only through such an understanding, and through a continuous study of events in China, will it be possible to foresee with any degree of reliability the trade policies which the Chinese may adopt from time to time.

Importance of China in United States Trade

Because of the disruptive effects of the long war with Japan, a description of Chinese foreign trade should be based on the period prior to 1938. In total value, China did not account for a large proportion of United States trade, averaging only 2 percent of total exports and 3 percent of total imports during the period 1933–37. However, for certain products, including some agricultural items, China was an important market or source of supply for the United States.

In the year ended July 1937, China purchased 14 percent, by weight, of United States exports of flue-cured tobacco and 3 percent of United States exports of raisins. China also purchased between 1 and 2 percent of United States exports of the following commodities: Condensed milk, evaporated milk, canned asparagus, canned pork, fresh oranges, and wheat flour. In certain prior years China had occasionally purchased considerable United States wheat and flour but was not a steady market for these United States products. China's takings of cotton were declining as its domestic production increased. In general, the United States sold more nonagricultural than agricultural products to China.

In respect to imports, the reverse was true, since the greater part of United States imports from China were agricultural in origin. In the year ending July 1937, China supplied 99 percent, or more, of United States imports of dried eggs, frozen eggs, and tung oil; about 70 percent of United States imports of shelled walnuts and sesame seed; and 38 percent of United States imports of peanut oil. Other important United States agricultural imports from China, with the percentage from that source, were the following: Carpet wool, 16 percent; sausage casings, 10; unshelled peanuts, 9; tea, 7; and raw silk, 5 percent.

Because of the disruption of production and transportation in China, and throughout the Far East, resulting from the Japanese war and continuing civil strife, China has been, since the close of the war, a market for considerable United States cotton, wheat, and wheat flour. These markets probably will recede to approximately the 1936–37 position as production and transportation are restored to normal in the Far East.

Wartime Currency Inflation and Foreign-Exchange Rate

Before the Japanese attack in 1937, the Chinese were making rapid progress in economic and social affairs. An internal war against an autonomous Communist army was fought from 1927 onward, but the general trend was toward political and economic integration.

The Government's finances were reasonably sound, and its international credit was good. Under these conditions agricultural, and other, foreign trade was subject to only moderate import and export tariffs and surtaxes designed mainly to produce revenue for the Central Government.

The effect of the Japanese war was to deprive the Central Government of a large share of its revenue from the tariffs and from other taxes, since the principal ports and industrial areas were occupied by the enemy. At the same time the expenses of the Central Government were enormously increased. Deprived of most sources of revenue and not being able to establish and administer substitute taxes of sufficient value, the Central Government inevitably resorted to the

*Office of Foreign Agricultural Relations.

printing press to pay its bills. Through inflation, as well as through such taxes as could be collected, the unavoidable cost of the war was charged to the people.

As a revenue measure, inflation has many defects but is usually the method of last resort in a nation fighting for its existence. There was an element of inflation in the revenue program of every nation during World War II. The much greater prominence of this feature in the Chinese revenue program resulted, fundamentally, from the fact that the Chinese economy is still mainly in the handicraft stage. Such an economy, typical of the sixteenth to eighteenth centuries in the West, is not capable of supporting complex and expensive government, even in peacetime. Still less is it capable of supporting by orthodox revenue measures a full-scale war against an industrialized nation.

Before the Japanese war, the Chinese dollar was valued in foreign exchange at the rate of about 3.39 Chinese dollars to one United States dollar. Under pressure of the wartime inflation, the value of the Chinese dollar declined and the exchange rate therefore rose gradually.[1] In April 1942 an official rate of 20 to 1 was fixed. Since inflation continued, this soon ceased to reflect the market value of the currency, which continued to decline steadily. This decline was measured by a steady rise in Chinese commodity prices and in the price of foreign money on the unofficial, free, or "black" market.

Since private foreign trade was virtually impossible in China from 1942 until the war ended, the fixed official exchange rate was not a major factor in the Chinese economy. However, foreigners resident in China and paid in foreign money gradually adopted the custom of selling the actual foreign currency for Chinese dollars on the free market. Only by this means were they able to obtain enough Chinese money to purchase the necessities of life at the high, inflation-born prices.

[1] A currency is essentially a commodity with a special use, and the value of a currency is susceptible to changes in the supply of and demand for it. When the quantity of a nonredeemable paper currency is appreciably increased in relation to the demand for its use, it is said to be inflated. The value of each dollar declines, and the prices of commodities and of foreign currencies consequently rise. The price of foreign currency is the so-called foreign-exchange rate. If not prevented by law, foreign-exchange rates thus tend to rise as the domestic currency declines in value through inflation, assuming that the foreign currencies themselves remain approximately stable in value.

Wartime Trade Regulations

The war against the Japanese naturally had a pronounced effect on Chinese foreign-trade regulations. The Chinese Government at first banned the importation of many commodities as unnecessary in wartime and enacted laws against trading with the enemy. As the war went on, however, the Japanese blockade became more effective, and available supplies of foreign goods were exhausted. Tariffs were then drastically lowered, and the prohibited list was shortened to facilitate imports. A regulated trade with Occupied China was encouraged. Exports were placed under Government control in order to increase funds available to the Government for essential foreign purchases. All the special trade-control measures introduced during the war were designed to aid in the prosecution of the war and were regarded as temporary.

Postwar Foreign-Exchange and Trade Regulations

In the fall of 1945, not long after the Japanese surrender, the Chinese Government took steps intended to restore most import and export trade to private commercial channels on the prewar tariff basis. For example, the Government corporation which had handled the exportation of tung oil, bristles, tea, silk, and wool during the war was dissolved, and this business was again opened to traders. Tariffs were restored to the 1934 rates, except that all remained on the ad valorem basis to which they had been converted during the war.

In contrast to the direct trade controls, foreign-exchange controls were retained after the close of the war. Exporters were still required to sell to the Central Bank of China the foreign currency which they received, and this at the official rate of 20 to 1. This requirement made profitable exportation virtually impossible, since the value of the Chinese currency, as reflected in the market rate, was only about one-hundredth of the official value. The free-market rate in Chungking in January 1946 was about 1,500 to 1, and in Shanghai in February it was about 2,400 to 1. For importers, the official rate was favorable; but importation was hampered by shortages of shipping, warehouses, customs, and other port facilities.

Furthermore, it was difficult for traders to purchase foreign exchange, except for the importation of articles considered essential by the Chinese Government.

Under these conditions, foreign trade failed to revive. Early in March 1946, after 6 weeks of near chaos in Shanghai, with export trade at a standstill, a new official rate of exchange was fixed at 2,020 to 1. However, a considerable measure of Government control over imports was reestablished. Commercial imports were divided into three main classes: Prohibited, licensed, and unrestricted. The prohibited list consisted of items classed as luxuries and contained no agricultural products. Among items subject to special import licenses, however, were sugar and leaf tobacco. Manufactured-tobacco items were among those on which a special luxury surtax of 50 percent of the import duty was imposed. Importers of licensed goods were required to register with the Customs, supplying information which would be used in assigning them import quotas for the second quarter of 1946.

All foreign-exchange transactions were to be conducted under the supervision of the Central Bank of China, which "appointed" certain other banks to deal in foreign exchange. All exchange received from exports was to be sold to the Central Bank, or an appointed bank, at the official rate of 2,020 to 1. A few items were prohibited from being exported because of their shortage in China. These included, among others, rice, wheat, wheat flour, cotton yarn, and cotton cloth.

The establishment of a more equitable rate of exchange was of considerable temporary benefit to Chinese foreign trade. However, since the rate was fixed, and since the progressive inflation of the Chinese currency continued as before, the new exchange rate gradually became farther out of line with Chinese domestic-commodity prices. Importing became more and more profitable, whereas exporting became less and less profitable. Under these conditions, imports were several times the value of exports, and Chinese foreign-exchange assets were rapidly being reduced without being replenished. Chinese manufacturers found themselves unable to compete with foreign goods imported under these favorable conditions, and they strongly petitioned their Government to raise import tariffs to new heights. Protectionist opinions in China were given unusual preferment by these conditions.

As was to be expected under the circumstances, special import restrictions were added from time to time. Late in May it was provided, for example, that no exchange could be sold without prior approval of the Central Bank of China for importation of fresh fruits and miscellaneous prepared or packaged foodstuffs. In June, further restrictions were placed on the sale of exchange, depending on the credit standing of importers, manner of intended sale of the goods, etc.

In the face of an impossible situation, the Chinese Government on August 19, 1946, again raised the rate of exchange, this time to 3,350 to 1. Between March and August, domestic-price increase had been high enough to match the August increase in exchange rates, which therefore had no measurable effect on commodity prices. As before, the inflation continued and apparently at an increased rate. This may have been the result of increased expenditures of the Government made necessary by the intensified war with the Communists and by strong postwar efforts of the Government to rehabilitate the national economy. Whatever the cause, the new rate of 3,350 to 1 was very rapidly outdated by the rise in domestic prices.

Under these conditions, further regulations intended to restrict imports and encourage exports were to be expected. Effective September 7, 1946, all duties and surtaxes on exports were abolished. These had averaged only about 7.5 percent ad valorem, but export duties had been in effect since the middle of the nineteenth century. In mid-November 1946, a new and much more elaborate system of controls over imports and importers was announced. As was also true of the regulations promulgated early in March, these were described as "temporary."

Under the November rules for temporary regulation of foreign trade, imports are divided into four schedules, one of which is subdivided into two groups. Items in Schedule I are capital goods, the importation of which is subject to prior approval of a newly created Board for Temporary Regulation of Imports. Imports in Schedule II are prime necessities; they are subject to licensing and assignment of quotas by the Board. Of items of special agricultural interest, Schedule II includes cotton, jute, wool, tobacco leaf and stalk, sugar, wheat and flour, rice, and many types of lumber.

Imports in Schedule III (a) are subject to prior license by the Foreign Exchange Examination Department of the Central Bank of China. Items of

special interest to agriculture in Schedule III (a) are evaporated and condensed milk, milk foods, barley, buckwheat, corn, millet, oats, rye, bran, flour and cereal products, hops, malt, molasses, coconut oil, and linseed oil.

Schedule IV includes items the importation of which is prohibited. These are mainly so-called luxury items and include only one agricultural product, namely, canned asparagus. Schedule III (b) covers all items not mentioned in other schedules, the importation of which is temporarily suspended.

Under the regulations, import licenses are to be issued only to importers who register with and are approved by the Board.

Exports remain free of restrictions, except that certain items, including rice and paddy, wheat, wheat flour, flour products, and cotton yarn and cloth, can be exported only by special permit of the Customs. Foreign exchange received by importers must be sold to the Central Bank of China at the official rate. This was 3,350 to 1 when the regulations were issued.

The first effect of the November regulations was to reduce drastically the importation of goods, pending the registration of importers and the granting of quotas. The procedure proved to be very long-drawn-out and had not been completed even by mid-February 1947. Imports into Shanghai in December 1946, exclusive of UNRRA shipments, were valued at only 109 billion Chinese dollars, compared with 192 billion in November. Further reductions in imports will be registered for January and February 1947.

Exports again came to a standstill late in 1946 because of the cumulated rise of domestic prices in relation to the stationary rate of foreign exchange. In an attempt to meet this situation, the Chinese Government announced on February 6, 1947, the formation of a Board for the Development of the Export Trade, whose function will be to improve the quantity and quality of export goods produced in China; improve internal processing, grading, and other marketing procedures; and develop foreign demand. The foregoing were recognized to be long-term, basic forms of assistance to the export trade. At the same time, an export exchange subsidy of 100 percent of the f. o. b. value of exports was announced, the subsidy to be paid at the time the exporter turned in his foreign exchange to the Central Bank. This amounted to an increase in the exchange rate, for export transactions only, from 3,350 to 1 to 6,700 to 1. Funds for this subsidy were to be obtained through a 50-percent ad valorem surcharge on selected categories of imports.

Soon after the export subsidy was announced, it was discovered that the foreign-trade regulations of countries which were principal purchasers of Chinese goods, especially the United States, provided automatically for the imposition of import duties on duty-paying goods to offset any new export subsidy on the part of a supplying country. In the case of goods not on the United States free list, the Chinese export subsidy would be nullified.

The cumulative effect of the stoppage of imports due to the November registration and licensing regulations, the stoppage of exports due to the inflation having far outstripped the fixed rate of exchange, and the apparent lack of any effective countermeasures generated a financial panic in China, during which the free-market value of the Chinese currency declined rapidly and the foreign-exchange rate rose to 19,400 to 1. There was a reaction from this extreme until the rate came to rest at 11,000 to 12,500 to 1. The free-market rate had been approximately 6,500 to 1 in January before the spectacular rise occurred.

The February crisis seemed worse than preceding crises and called forth drastic action by the Chinese Government. The export subsidy and import surtaxes recently promulgated were abolished, and other provisions were made. The most important of these was the establishment on February 16, 1946, of a new official exchange rate of 12,000 to 1. It was announced that an exchange quota of $472,590,000 (U. S.) was to be allotted to necessary imports of raw materials and machinery for Chinese industry during 1947. The Board for Temporary Control of Imports was expected to announce the quotas for the first half year, totaling about $200,000,000 (U. S.).

Measures for internal rationing and against hoarding of necessities and for internal price and wage control were also announced, along with prohibitions on the private purchase and sale of gold and of foreign currencies. These were a reaction to the spectacular price fluctuations which had occurred.

A third set of provisions was designed to balance the Chinese Government budget and halt inflation. Certain budget appropriations are to be deferred. Collection of taxes is to be more rigidly enforced. The Government will expedite the

sale of enemy properties to private buyers. Government-operated enterprises are to be sold to private buyers, except for heavy industries and utilities.

The fixed character of the official foreign-exchange rate—the essential defect in all previous sets of regulations governing foreign trade—was still maintained.

Factors Affecting Outlook for Agricultural-Trade Policies

As was stated in the beginning, the Chinese have a handicraft economy unable to support through taxation elaborate governmental schemes for the control and operation of the economy. A shortage of trained administrative personnel, also characteristic of the handicraft economy, further precludes the successful operation of elaborate governmental economic controls. Furthermore, the country, still in a devastated condition as a result of the Japanese war, is continually incurring added capital losses through the deliberately destructive activities of the Communist armies, and the Government must devote a considerable share of expenditures to the prosecution of the war against those armies. If a strong attempt were made to balance the budget, it follows that all Government activities, except those considered absolutely necessary, would have to be dropped.

The foregoing statement may apply to the new internal-price, wage, ration, and speculative-trading controls. Since these deal only with the symptoms and not with the basic causes of the inflation, failure to enforce them would not be of much economic importance; but the expense inherent in the attempt would contribute somewhat to the inflation.

If the Chinese Government can drastically pare its expenditures and develop its revenue sources so as to pay its current expenses without further resort to the printing press for money, the inflation can be halted, and both exports and imports can occur at the new official exchange rate. Future trends in trade regulations depend mainly on the outcome. If the inflation can be halted, a progressive relaxation of both trade and foreign-exchange controls is to be expected.

If, on the other hand, the monetary inflation continues while the official exchange rate is fixed, it follows that the trade and exchange crises of February 1946, August 1946, and January-February 1947 will be repeated as soon as the internal monetary inflation has lifted domestic commodity prices far enough above the new fixed rate of exchange. The new crisis, like the previous ones, would be characterized by the stoppage of exports and by increased pressure to import, and probably it would lead to the setting of a new and higher official rate of foreign exchange. Still stricter controls over imports probably would be promulgated.

A present development of increasing importance is the diversion of Chinese foreign trade—both imports and exports—to ports in South China where, through the technique of smuggling, the trade can be conducted on the basis of what amounts to a free-market exchange rate between the Chinese and foreign currencies. If Chinese internal prices should continue to increase, as previously, in the presence of the fixed official rate of exchange, an increase in such illegal trade could be expected. There would also be a corresponding increase in the Government's efforts to thwart it.

Should inflation continue, there is, of course, the alternative possibility that the Chinese Government would decide to abandon the attempt to maintain a fixed official exchange rate. Such a course of action would allow the legal exchange value of the currency to adjust itself day by day to the inflation, just as internal commodity prices and the illegal black-market exchange rates have done all along. Periodic major crises would not then occur.

FOREIGN AGRICULTURE HALLY H. CONRAD, EDITOR

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The growth of an illicit foreign trade based on the black-market exchange rate has demonstrated that two-way trade can be conducted on this basis, even when legal barriers exist. Furthermore, the legalization of the free, fluctuating exchange rate may prove to be the only practicable method of regaining customs control of the illegal trade, and of preserving a normal share of the total trade for Shanghai and other central ports. Against these forces working for the legalization of the free-market exchange rate there is, however, the present almost world-wide preoccupation with the maintenance of fixed official exchange rates under all manner of economic and monetary conditions, suitable or not.

The outlook for the exchange rate and the inflation strongly affect the outlook for other features of Chinese trade-control policy. Present Chinese tariff rates on most imports are moderate. Since the principal purpose of the tariff is to raise revenue, there is a tariff on almost every commodity imported. In 1936, when rates were at the present level, all import tariffs collected equaled about 25 percent of the value of all imports. In addition, a domestic excise tax on manufactures, known as the consolidated tax, is also collected on a few imported commodities by the Customs. These taxes were increased somewhat in October 1946. On tobacco leaf the present tax is 30 percent ad valorem; on sugar, 25 percent; and on wheat flour, 2.5 percent.

During the postwar period the maintenance of an artificial exchange rate for the Chinese dollar has stimulated the Chinese business community to demand high protective tariffs against foreign imports which compete with Chinese farm and factory products. Thus far, the Chinese Government has not acceded to such demands but has adopted the alternative of prohibiting a long list of imports and establishing strict quotas for, and far-reaching controls of, the remaining imports. Should inflation continue, the exchange rate remain fixed, and a fourth trade crisis develop, there is no guaranty that the Chinese would continue to adhere to a policy of levying tariffs for revenue only.

During the war and postwar period the Chinese organized a number of Government corporations for the operation, development, and control of industries formerly in private hands. This was for the most part an attempt to speed the modernization of these industries. Private businessmen in China, as well as foreigners interested in Chinese investments, were not, of course, in favor of this nationalization of industry. Apparently such enterprises are now recognized to be beyond the financial powers of the Government to operate, and the previous trend toward nationalization seems to have been reversed.[2]

The subsidization of exports is beyond the fiscal power of the Chinese Government if a serious attempt is to be made to balance the budget and halt inflation. Direct subsidization of exports is therefore unlikely to be resumed.

Eventually the Chinese intend to improve their domestic agriculture so as to be able to produce the entire national requirements of rice, wheat, cotton, and tobacco. Such goals cannot be approached under present disturbed conditions, and they would take some years to attain even if internal peace had been restored. Self-sufficiency probably could be reached sooner in cotton than in tobacco, wheat, or rice. Self-sufficiency in cotton had practically been attained before the war with Japan.

The Chinese also intend to expand and improve as much as possible the production of such agricultural export commodities as silk, tea, tung oil, carpet wool, and others so that they will be able to pay for the increased materials, machinery, and technical assistance which would be required for the economic development of the country. Postwar conditions have not thus far been favorable to this plan. Except for a short time following the establishment of each new foreign-exchange rate, prices of export staples in China have been too high, when expressed in terms of American money, to permit profitable, legal exportation. This has resulted in the prices of the same commodities remaining relatively low, when expressed in Chinese currency, compared with the prices of products which Chinese producers can sell on their own domestic market. In consequence, the production of Chinese export staples has been slow to revive.[3]

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[2] It is not clear whether or not this reversal will apply to the Government of Taiwan [Formosa], where all sugar trade is vested in an official company, and where tobacco, wines, and spirits are trading monopolies of the local government. The trend in Formosa since the Chinese took over the island has been toward bringing all foreign trade under government control.

[3] See the chapter on International Trade in the REPORT OF THE CHINA-UNITED STATES AGRICULTURAL MISSION, made public February 24, 1947.

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