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and, for this reason, has been the victim of a considerable amount of unpopularity. But what is planning? The planning of any activity seems to be the highest act of which the human intellect is capable. It is founded on the basic human instinct for security, on the preparation for the unknown. Can such a procedure reasonably be criticised, particularly in the case of F.A.O., when the raising of world nutritional standards is the primary objective? By what other means than concise, accurate and careful planning can food production, consumption and distribution be co-ordinated in the interests of the world population at large? Whatever may be said of planning within a nation, surely no criticism is valid from the international point of view.

Conclusion.

The success of F.A.O. is essentially linked with that of the United Nations Organisation and its subsidiaries. And the success of all the international organisations which have come into being since the conclusion of the recent War depends on the continuation of a spirit of co-operation. At first sight this concept of co-operation seems to be an intangible. But is it really so? Was not the spirit of co-operation the essential and central ingredient in the successful Allied War effort? In spite of failures in some aspects of international diplomacy, have we not before us examples of the application of the co-operative principle in recent The recent world trade discussions at Geneva show examples of nations subordinating individual objectives to the welfare of the body of nations as a whole. With a continuation of co-operation between the members of F.A.O. much can be expected of the organisation. In actual fact, the only insurmountable obstacle to the success of F.A.O. would be a breakdown in the present good relations between members. Otherwise, there is every reason to-hope and expect that F.A.O. can proceed to plan solutions of world food problems in order to lift the level of food intake to a plane never previously occupied by an aggregate of the world's peoples.

THE CURRENT RICE SITUATION WITH PARTICULAR RELATION TO AUSTRALIA.

By

P. C. DRUCE, B.Ec.

Rice, unlike wheat, has been in short supply since the outbreak of war with Japan and, while Asiatic production has increased in the past two years, it is still considerably below the pre-war level.

This, and the fact that potential demand has risen considerably has caused a sharp rise in rice prices over the past few years and has enabled Australia to dispose of her entire rice crop at a price which is very favourable to the local grower. How long is the current shortage likely to last? For how much longer can Australian growers expect to be able to sell their entire crop at the present high price? These questions are not easy to answer, but

a brief examination of the world rice trade before the war, and of wartime developments serves to show that, while the present position cannot be expected to continue indefinitely, it may be five to eight years before world rice production reaches pre-war levels. However, the time will undoubtedly come when the price of rice will fall substantially and the Australian grower will again be faced with the problem of disposing of that portion of his crop which is in excess of local requirements at a price very much below that which he receives for rice sold on the domestic market. There is no evidence to suggest that within the next few years Australia will be able to dispose of more rice than she was able to sell before the war at a price that would prove satisfactory to Australian growers. It would therefore appear that if the Australian rice grower is to remain in the comparatively satisfactory position that he has occupied since the establishment of the industry on a commercial basis the total area sown to rice in this country will have to be stabilised at about 25,000 acres within the next few years. In the meantime there is an undoubted market for all the rice Australia can produce.

The brief review of the world supply-demand situation which follows and the accompanying tables should serve to indicate that while rice is still in short supply at the present time it would appear likely that this shortage will be overcome within the next five to eight years.

World Production and Trade.

Pre-war Asia produced roughly 97 per cent. of the world's rice output and over 60 per cent. of this rice was produced in two countries, China and India. China's average production in the immediate pre-war years has been estimated at 2,623 million bushels (paddy or rough rice) and that of India at 1,905 million bushels; yet both of these countries were net importers of rice prior to the war. Indian production remained fairly stable during the war period but Chinese production fell off considerably and in 1945-46 was estimated at only 2,100 million bushels. Production has improved considerably since then but these two major rice consuming countries are still net importers of rice and are likely to remain so for some considerable time. Table I sets out the world rice production position both pre-war and for the current season.

The other main rice-producing countries in pre-war Asia were, in approximate order of importance, Japan, Indonesia, Burma, Indo-China, Siam, Korea, the Philippine Islands and Formosa. Formosa producing only about I per cent. of the total Asiatic production. Prior to the war the five major exporters of rice, in order of importance, were Burma, French Indo-China, Siam, Korea and Formosa. These five countries accounted for 94 per cent. of the total pre-war international trade in rice. The major Asiatic importers were Japan, India, British Malaya, Ceylon, China, Netherlands Indies and the Philippines, while some rice was also exported to Europe and to various American countries. However, by far the greatest part of international trade in rice was intra-Asiatic.

TABLE I-World Acreage Production of Rough or Paddy Rice.

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			Acreage.			Yield per Acre.	r Acre.		[Production.		
Continent and Country.	Aver	Average.		•		Average.		Average.	age.			
	1930-31 to 1934-35.	1935-36 to 1939-40.	1945-46.	1946-47.	1947–48.	1935-36 to 1939-40.	1946-47.	1930-31 to 1934-35.	1935-36 to 1939-40.	1945-46.	1946-47.	1947-48.
No.	1,000 acres.	I,000 acres.	I,000 acres.	1,000 acres.	1,000 acres.	bushels.	bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	1,000 bushels.	r,000 bushels.
Fil Salvador	2.8 8.8 4.4.8	25 95 50 1.004	34 166 101 1.494	170 105 1.567	173	27:7 42:2 32:0	41.2	530 3,478 960 41.572	693 4,007 1,600 49.852	799 6,125 2,585 68,150	7,000	75.047
plic		80 80 10	75 134 22	72 136 22	70	21.4 36.3 30.0	2 2 2 8 2 2 2 8 2 2 2 4	935	2,905 300	1,733 4,328 711	2,029 3,472 844	2,110
Total	061,1	1,410	2,220	2,300	2,370			\$1,100	62,900	88,900	92,700	000'66
Eu ope— Bulgaria Italy Portlugal Spain	360 39 39 117	19 362 50 110	22 245 55 119	14 301 64 125	330 65 125	54.8 103.9 68.0 124.4 <i>c</i>	35.7 86.4 54.7 76.4	791 34,139 1,740 14,558	1,041 37,620 3,398 10,600	698 20,000 2,179 10,290	\$00 26,000 3,500 9,550	29,000 3,800 12,000
Total (excluding U.S.S.R.)	540	560	480	550	580			51,500	53,100	34,200	40,500	47,000
U.S.S.R. (Europe and Asia)	328	3844		335		42.34	:	10,785	16,2254	:		
Asia— Iran Iraq Turkey British Malaya Burma China Formosa Manchuria French India French India French India	\$60d \$16d \$60d \$740 \$7,099d \$1,609 \$472 \$13,505	5346 3866 3866 78 12,671 48,1616 1,616 782 1,0206	6,983 46,000 46,000 940 9,800	36 7,734 45,927 1,297 400 9,600	890 8,400 46,796¢ 1,450 400 8,900	22.55 22.55 22.55 22.55 22.55 25.55 25.55 25.55 25.55 25.55 25.55 25.55 25.55 25.55	20.00 20.00 20.00 37.00 80 80.00 80.00 80.00 80.00 80 80 80 80 80 80 80 80 80 80 80 80 8	22,413 <i>d</i> 7,750 <i>d</i> 3,329 25,333 3,88,219 2,345,574 7,5340 14,923 1,923 1,923 1,923	18,577 17,176 17,174 2,623,34 8,534 8,534 85,704 31,783 316,0384	20,802 13,802 18,650 2,13,445 2,13,445 2,13,954 4,0,671 39,094 13,22	22,159 13,720 2,070 19,896 193,412 2,320,009 55,109 15,000	22,200 11,760 2,260 25,000 24,000 2,358,593 70,000 15,000 15,000

Asia—continued, India f Ispan Korea Netherland Indies Philippine Islands	 ndies h ands		70,288 7,887 7,887 4,112 9,140	72,707 7,862 3,838 9,7164 4,918	79,885 7,800 2,5848 7,770 4,346	∞	7,830 2,7448 4,900	26.2 75.8 51.0 31.6d	25.8 72.4 72.4 72.6 72.0 72.0 72.0 72.0 72.0 72.0 72.0 72.0	1,995,645 557,217 197,500 276,935	1,904,819 595,845 195,763 306,9304 109,385	1,961,877 457,007 117,3218 200,000 87,466	2,090,000 557,548 110,1128 250,000 100,300	550,000 130,000g 109,000
Total (excluding U.S.S.R.)	 cluding	 ; U.S.S.R	H	<u> </u>		189,400	189,600	100	2	6,802,300	7,115,700	5,963,200	6,425,600	6,474,000
South America Argentina Brazil British Guiana Chile Colombia Bruador Paraguay Peru Surinam Umerica	:: _e ::::::		25,074 2,074 7 8 1144 1126 126	2,323 70 70 13 13 10 100 100 100	4,154 4,154 195 119 119 148	1117 4,120 101 80 80 101 15 124 40	- nga	8.98.99 9.99 9.99 9.99 9.99 9.99 9.99 9.99 9.99 9.99 9.99 9.99 9.99 9.99 9.99 9.99 9.9	69 69 4 69 69 69 69 69 69 69 69 69 69 69 69 69	2,584 2,588 2,588 2,212 2,212 2,212 2,212 2,212 2,211 2,211	6,64 1,355 1,255 1,255 1,255 1,355 1,355 1,355 1,355 1,556 1,556 1,556 1,556 1,566 1	135,736 135,736 5,028 5,028 6,030 7,691 7,691 1,724	125,000 5,123 5,349 5,349 5,900 7,100 7,100 7,553 2,553 1,814	roa
Total	:		2,57		5,	5,200	5,180			74,800	89,500	181,800	163,500	160,000
Africa—Belgian Congo Egypt French West Africa Madagascar Sierra Leone	o Äfrica 	:::::	352 1,065 307	220d 2463 5 1,562d 4 1,195	2,459 1,430	656	700 1,480	71.7 71.6 83.3 74.86.8	70.1	20,876 18,087 34,166 9,015	2,475d 33,155 20,936d 33,823 9,100	4,605 42,453 29,051 37,722 9,308	45,971	46,040
Total	:	:	3,560	0 4,190	060'9	9,160	6,260			88,900	106,000	134,600	136,700	139,000
Oceania— Australia Fiji Islands	::	::	21 01 10	1 23	28	32	30	92.0	86.0	1,629 480	2,117 431	2,553 1,060	2,753	80
Total Total, World	···	: :	40	0 40	80	90	90			2,200	2,700	6,418,000	4,900	4,900
			_	1			1/4							

Office of Foreign Agricultural Relations: Prepared or estimated on the basis of official statistics of foreign governments, reports of United States foreign-service officers, and other information.

a Crops harvested in Northern Hemisphere countries during the latter part of the year, together with those harvested in Asia principally from November to May, are combined with crops harvested in Southern Hemisphere countries during the first part of the following year.

• Preliminary.

• Planted acreage. fincludes acreage and production in areas regularly reported only comprising about 92 per cent. of the total rice area of India. g South Korea only.

† Acreage not yet planted.

Japan's early war successes completely upset the world rice market, cutting off the major surplus areas from the net importing areas and causing an acute shortage in large parts of the riceconsuming world. Not only was this the case but in most of the surplus-producing areas, and particularly in Burma and British Malaya, the production of rice declined appreciably. There was a serious fall in production also in China, Japan and the smaller producing areas of Formosa, Korea, Siam and the Philippines. This reduced production was due partly to the ravages of war and partly to the fact that surplus producers such as Burma were cut off from their export markets and necessarily had to restrict production to meet the demands of their own domestic market. Only in India was rice production maintained at its pre-war level, but although this was the case India was acutely short of rice during the war due to the impossibility of importing from Burma, and also to the fact that her population was expanding at a rapid rate.

Such was the pre-war and wartime position of the rice industry in Asia; what of the rest of the world? Outside Asia the main rice-producing areas were Egypt and Madagascar, in Africa, Brazil and the United States in America, and Italy, while several other European countries also produced significant, although comparatively small, quantities of rice; all of those countries mentioned produced substantially more rice than did Australia. Neither Europe nor the Americas, however, were self-sufficient in rice, although both the United States and Brazil exported small quantities of rice prior to the outbreak of war. During the war European production declined to some extent; however, owing to the impossibility of obtaining Asiatic supplies, North American production increased by nearly 50 per cent., while South American production increased by approximately 90 per cent.; production in Africa also increased appreciably. Increased production in the Americas means that these continents are now not merely selfsufficient in rice but have a surplus for export. Recently rice has been exported from the American continent to Asiatic countries.

This expansion of rice growing in the Americas will prove an important factor in the future development of international trade in rice; the production of rice in North and South America is very small relative to production in Asia; however, the important point is that the Americas, formerly a deficit area, are now net exporters; they have captured markets which were formerly supplied by Asiatic producers.

In considering the future prospects for the world rice trade it must be remembered that, although world production of rice exceeds substantially that of wheat, international trade in rice is comparatively insignificant. Only about 7 per cent. of the average annual world production entered world markets prior to the war and much of this was intra-Asiatic trade. It should therefore be obvious that when Asia again attains her pre-war level of rice production other rice-producing countries will face serious difficulties in disposing of their crops.

The United Nations Food and Agriculture Organisation recently appointed a Study Group to investigate the future prospects of the rice industry. The group's report was presented in July, 1947, and therein it is stated that "long term export prospects and requirements of rice are difficult to forecast because of many uncertain factors in the situation some countries have planned development projects that will bear fruit in the not too distant future, while other countries are experiencing internal difficulties that make an appraisal of the future situation highly conjectural."**

However, the Study Group's general view appears to be that rice will remain in short supply for several years and that even by 1952 there will be a deficit of something like 3 million metric tons (milled rice). Table II shows how this estimated deficit is made up.

TABLE II.

Forward Estimate of Requirements and Supply of Rice from South and East Asia, 1952.

Country.			Estimated Rice- eating Population.	Present Annual Import Require- ments.	Assumed Annual Increase in Population.	Estimated Import Require- ments in 1952.	Estimated Surpluses Available in 1952.
·			millions.	m. tons.	percentage.	m. tons.	m, tons.
Burma	•••						3.3
China			300∙0	2.40	0.9	1.00*	
Siam			· · · · · · ·				1.6
India	•••		250.0	2.40	1.0	3.40	
Indo-China							1.3
Malaya			6.9	0.69	1.0	o·68	
Hong Kong			r·8	0.31	2.0	0.20	
British North Sarawak.	Borne	o and	0∙8	0.02	1.0	0.03	
Indonesia			70.0	2.00	1.24	0.50	
Cevlon			6.8	0.63	1.0	0.67	
Philippines			13.2	0.28	2.2	0.50‡	
Котеа			-33				0.5
Tapan						2.00	
Brazil							0.18
Europe						1.40	
Tota	al					10.38	6.8

^{*}Estimate furnished by the Chinese members; it is expected, however, that China will be self-supporting if fertilisers and machinery are made available.

† Based on pre-war average consumption per caput of 87 kg. of rice

yearly.

‡ Estimate furnished by the Philippine members; it is expected, however, that the Philippines will be self-sufficient by 1952.

§ Excess over exports consigned to the Middle East and East and West Africa.

Notes:-

- (a) For purposes of calculation, the present and future requirements of areas other than Europe have been based on the assumption of a uniform rate of consumption of 340 grams (12 oz.) of rice per person per day.
- (b) The Middle East and South and West African requirements have been offset against Egyptian and Brazilian production.
- (c) It is assumed that, excepting Brazil, the rice-producing countries in the Western Hemisphere will have no surpluses for export to the Eastern Hemisphere countries. The estimates of surpluses are, on the whole, regarded as conservative.

^{**}Food and Agriculture Organisation of the United Nations "Report of the Rice Study Group."—-Washington, July, 1947.

On the other hand it would appear that this deficit will be overcome in a relatively short period after 1952, perhaps in two or three years. Summing up then, it would appear that Asiatic production of rice will be at least as great and will probably exceed pre-war production by 1955 or 1956.

By the time this stage is reached other exporting countries are likely to be experiencing some difficulty in disposing of their surplus production unless in the meantime they restrict their rice acreage.

The Australian Rice Industry.

The history and development of the Australian rice industry has been dealt with in an earlier issue of this journal* and it is not intended to cover it here in any detail except in so far as the most recent developments are concerned.

Australian rice production is insignificant when compared with Asiatic or World production; pre-war Australian rice production accounted for roughly .03 per cent. of world production. Rice production in Australia is, however, an important industry in the Murrumbidgee Irrigation Area, in the vicinity of 350 farmers deriving the greater part of their annual income from rice growing.

Rice was first produced on a commercial scale in Australia in the 1924-25 season and approximately five years later Australia became self-sufficient in rice. Almost from its inception the Australian rice industry has been a protected industry, whilst in addition it enjoys preference over foreign produced rice on the British market, where up to the outbreak of war almost the entire surplus was disposed of.

Australian rice is the only short-grain variety produced in the British Empire and as such entered the British market as a fancy rice. Even so the return to growers for rice exported amounted to only £7 per ton for paddy or rough rice as against £11 paid for rice used for home consumption. At these prices growers were not prepared to expand production to any extent and during the thirties there was very little variation in the acreage sown from year to year, the area being stabilised at about 23,000 acres, average production being in the vicinity of 42,000 tons (paddy rice).

With the outbreak of war with Japan and the consequent disruption of the world rice trade already noted, Australian rice was withdrawn from the domestic market, except in some special cases, and the entire output was directed to meet the needs of the Services and adjacent Pacific Islands. The grower was paid at the rate of £11 per ton, since increased to £11 17s., for his entire output. At the same time efforts were made to expand the rice industry both in the Murrumbidgee Irrigation Area and on the Berriquin and Wakool Irrigation Area. The accompanying table, Table III, gives some indication of the success of this policy in the later war years. So as to avoid the building up of private vested interests, the area sown at Wakool in the three years 1944 to 1946 was handled by the Water Conservation and Irrigation Commission and not by individual growers. Rice production in that district was discontinued in 1946.

^{*}See "The Rice Industry in New South Wales," by R. B. McMillan, in the "Review of Marketing and Agricultural Economics," July, 1945.

TABLE III.

Australian Rice Production Statistics.

Produced entirely in the Murrumbidgee and Wakool Irrigation Districts of N.S.W.

	Yea	r. 		No. of Holdings.	Area.	Marketed Production.	Yield per Acre.	Gross Value at Place of Production
					acres.	tons.	tons,	£
192425	***	•••			157	222	1.41	
1925-26	• • •	•.••		30	1,987	1,500	•75	12,030
1926-27	•••	•••		67	4,772	4,887	1.02	48,320
1927-28	***	• • •		127	12,080	16,483	1.36	181,320
1928–29	•••	•••	• • • •	221	14,058	23,228	1.65	201,850
1929-30	•••	•••		258	19,997	32,862	1.64	289,620
1930-31	• • •			270	20,256	26,084	1.28	259,610
1931-32	•••			277	18,243	23,882	1.30	263,180
1932-33	•••	• • •	•••	280	22,787	35,347	1.55	304,820
1 933–34	• • • •	•••		292	20,379	39,939	1.95	337,600
1934-35	• • •	•••	• • • •	290	21,944	34,914	1.59	336,08
1935–36		• • •		304	21,757	39,180	1.80	354,620
1936–37	• • •	• • •		320	23,485	42,020	r·78	379,720
1937-38	• • •	• • •		319	23,814	42,113	1.76	380,220
1938–39	•••	•••	•••	313	23,532	51,517	2.10	440,430
1939-40	•••		•••	314	24,263	34,251	1.41	333,360
1940–41	•••			329	24,626	41,547	1·69	391,690
1941-42	•••	• • •		331	23,721	41,148	1.73	425,220
1942 -43	•••	•••	• • • •	348	34,327	57,153	1.66	640,990
943~44	•••	•••		364	41,529	75,078	r-8r	826,820
944-45	•••	• • •		330	24,596	31,338	1.27	349,790
945-46	•••	•••		(a)	28,372	50,806	1.78	(a)
1946–47	•••	•••		(a)	31,995	55,270	1.73	(a)
1947-48	•••			(a)	27,322	33,-7-	- 73	

Notes.—Sources—N.S.W. Year Books and Rice Marketing Board. (a) Not available,

It will be noted that area and production reached their peak in 1944, while in the current season the area sown has fallen to 27,322 acres. The reduction in area this year is due largely to watertable trouble at the Yanco end of the Murrumbidgee Irrigation Area. It is the Water Conservation and Irrigation Commission's intention to gradually reduce the area sown to rice in that part of the M.I.A., and in parts to eliminate it altogether. It is probable that the total area sown to rice in the M.I.A. next year will therefore be somewhat less than the area at present under this crop.

To offset this to some extent ex-servicemen who are to be settled shortly at Tullakool, part of the Wakool Irrigation Area, will be encouraged to produce rice in that area.

It is intended that in the vicinity of 24 rice farms be established in that district and at least in the early years of their development they should be able to produce substantial quantities of rice.

It would appear that eventually rice production in the M.I.A. will again be stabilised at the pre-war level of about 23,000 acres and that, in addition to this area, between 2,000 and 3,000 acres may regularly be sown in the Wakool Irrigation Area. However, next year and the two or three years immediately following rather larger areas may be sown and the total area under rice in this State may approach 30,000 acres.

^{† 64347—}B

The future of the Australian rice industry is not altogether clear; however, one or two points do emerge from the foregoing.

- (i) It appears that there will be a virtually unlimited demand, at satisfactory prices, for all the rice Australia can produce in the immediate future. The length of time during which this demand will continue cannot be estimated with any degree of accuracy but it might be as long as eight years.
- (ii) Sooner or later world production of rice will increase to the point at which there is an overall surplus to dispose of. At this stage, which informed observers expect may be reached about 1955, there is likely to be a sharp decline in rice prices (it must not be inferred that there will be no fall in current high levels of price before this occurs), and Australia may then be unable to dispose of her surplus at a satisfactory price.
- (iii) Summing up, Australian rice-growers can be reasonably confident of satisfactory markets for their entire production for several years ahead, but they must eventually be prepared to reduce their production to a level very close to that sown prior to the outbreak of World War II.

RECENT TRENDS IN WORLD PRODUCTION AND TRADE OF VEGETABLE OILS.

World production and consumption of fats and oils has increased materially during the past four decades. Expansion has been due to increased industrial and edible consumption per capita, as well as the increase in population. Annual world production of fats and oils (including arimal fats) was estimated at 19.3 million tons pre-war (1935-39). Estimates of 1946 world production range from 15 to 16 million tons. The most important changes in world fat production since 1939 are:—

- I. Decline in European animal fat production by I.4 million tons. Recovery is retarded by shortages of feeding stuffs, fertilisers and agricultural machinery.
- 2. The Japanese occupation of South East Asia cut off an area which, before the war, exported 1,300,000 metric tons out of total world exports of 5,000,000 metric tons. In addition, Manchuria and China, exporting 660,000 metric tons pre-war, were cut off.

During the Japanese occupation, vegetable oil production in South East Asia was completely neglected. Lack of coastal shipping, processing facilities, shortages of food and continued political and armed conflict in some of these areas have delayed resumption of exports. Exports from this area have fallen to an estimated 850,000 tons in 1947. This figure has only been reached by a phenomenal expansion of copra exports from the Philippines. The volume of Philippines copra exports has increased from 360,000 tons pre-war to an annual rate of over 600,000 tons during the first six months of 1947. Copra and cocoanut oil exports from Malaya and N.E.I. are still only a fraction of pre-war exports.