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978-0-521-14385-1 - Food Grain Procurement and Consumption in China

Kenneth R. Walker

Excerpt

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## 1

THE NATURE OF CHINA'S GRAIN  
PROBLEM IN THE 1950s

The size and diversity of China are great enough to invalidate most generalisations about the economic characteristics of the country. One generalisation which can be made, however, is that during the 1950s, irrespective of region, food consumption consisted overwhelmingly of grain (defined by the Chinese to include pulses, potatoes and soya beans, as well as cereals). In this respect China was a typical low-income, densely populated country in which the struggle to provide enough calories was the main preoccupation of the population. Only small amounts of meat (mainly pork), eggs, fish, edible oil and sugar were consumed, as the figures for several rural and urban areas of China, presented in Table 2, show. According to this evidence, grain accounted for between 81 and 91 per cent of total calories in our urban 'sample', and between 92 and 97 per cent of calories in the rural areas covered. Essentially, therefore, food consumption in China was synonymous with grain consumption.

China's grain 'problem' is not illuminated merely by looking at the statistics of average grain output per head of population during the six years 1952–57. Taking the period as a whole, average output per head was 293 kilograms (unhusked) and it grew from 187 kilograms in 1952 to 300 kilograms in 1957. At this level of generality, therefore, China was not particularly poor. Given the commodity composition of grain output, and after deducting seed, feed, grain for industrial use, and waste, 293 kilograms of grain produced were sufficient to provide approximately 2000 calories per head per day. It could then be claimed that China was 'self-sufficient' in grain.

The heart of China's problem, however, was distribution. National figures obscure considerable regional differences in (1) output per head; (2) the growth of output; and (3) the stability of output. All these elements indicated a need for large-scale grain redistribution – between rural areas of a single province and between provinces. Some

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[More information](#)*The nature of China's grain problem in the 1950s*Table 2. *Food consumption per head in selected areas of China, 1950s*

	Urban			Rural			
	North East (Harbin and Heilung- kiang cities)	North (Peking)	East (Shang- hai)	South (Canton and Kwang- tung cities)	North (Shansi)	Central (Chek- iang)	South (Kwang- tung)
<i>Kilograms</i>							
Grain	275	240	263	217	196	271	276
Vegetables	147	107	99	158	33	91	90
Meat	5.3	11.238	11.066	9.915	1.478	2.7	6.722
Edible oil	3.6	6.418	6.288	4.500	1.026	1.59	1.582
Eggs	n.a.	2.489	2.677	1.363	0.641	0.864	n.a.
Fish	1.64	n.a.	11.422	6.289	0.058	7.65	10.970
Sugar	3.3	4.65	2.047	4.000	0.252	1.00	3.436
Alcohol	4.55	n.a.	2.627	n.a.	n.a.	1.5	1.720
Poultry	n.a.	n.a.	1.198	4.399	n.a.	n.a.	6.063
<i>Calories</i>							
Grain	2539	2194	1873	1546	1726	1973	2041
Other	237	355	336	317	56	124	187
Total	2776	2549	2209	1863	1782	2097	2228
Grain %	91	86	85	83	97	94	92

n.a. not available.

Source: Appendix 1.

grain was needed to meet chronic deficits and some was required to offset short-term fluctuations in production. And, in addition, grain had to be mobilised from the rural to the urban areas. This chapter examines these three elements of China's grain problem in turn. It attempts to measure the scale of the problem and to set out its geographical complexion.

#### RURAL INEQUALITY OF GRAIN OUTPUT: THE PROBLEM OF INTRA-PROVINCIAL RURAL GRAIN TRANSFERS

The need to mobilise grain surpluses for redistribution among rural areas reflects the great inequalities of production per head of rural

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population. Approximately 97 million people<sup>1</sup> living in the countryside (18 per cent of China's rural population, 1952–57) permanently produced insufficient grain, in addition to those who suffered temporary deficits as a result of natural disasters. Of the 97 million, 35 million peasants<sup>2</sup> were in deficit because they specialised in the growing of industrial crops ('economic crops' in Chinese terminology) such as cotton, other fibre crops, tea and oil seeds. A further 50 million people<sup>3</sup> were in grain deficit simply because they were poor, living in low yielding areas. The remaining 12 million were fishermen,<sup>4</sup> forestry workers, salt producers or livestock rearers. Although they do not identify the location of rich or poor areas, interesting figures are available for 1951–52 from which a picture of inequality of production per head of rural population in China's 2200 *hsien* (counties) can be drawn. The results are given in Table 3. The national average for 1951–52 was 320 kilograms.

At the lowest end of the distribution were 72 million rural inhabitants in 343 *hsien* with an average output per head below 200 kilograms. This was very poor indeed: 200 kilograms of unhusked grain, after provision for seed and some livestock feed, could provide 1200–1400 calories, depending on the type of grain (different grains have different edible ratios). A good 'self-sufficiency' level would be around 275 kilograms per head providing (net) 1700–1900 calories, and it is interesting that Chen Yün, one of China's leading economic planners of the 1950s, in an important speech on the grain situation,<sup>5</sup> cited 280 kilograms per head of rural population as 'sufficient' for all uses. In this study 'self-sufficiency' is thus assumed to begin at 275 kilograms per head and amounts below that level are classified as 'deficit'. Moreover, 'self-sufficiency' is assumed to include all per capita levels from 275 kilograms to 309 kilograms. At 310 kilograms

<sup>1</sup> Total from figures in Sha Chien-li (Minister of Food), 'Glorious Achievements of the Grain Front', *JMJP*, 25 October 1959; and Pan Ching-yuan, 'Two Years of Planned Purchase and Planned Supply of Grain', *HCS* (no. 9), 1955.

<sup>2</sup> Sha Chien-li, 'Glorious Achievements of the Grain Front'.

<sup>3</sup> Pan Ching-yuan, 'Two Years of Planned Purchase'.

<sup>4</sup> Sha Chien-li, 'Glorious Achievements of the Grain Front'.

<sup>5</sup> Ch'en Yün, 'Questions Concerning the Central Purchase and Supply of Grain' (speech, 21 July 1955), *HHYP*, vol. 70 (no. 8), 1955, pp. 50–4. Note, however, that Chu Hang, 'The Basic Condition of China's Grain This Year', *HHPYK*, vol. 98 (no. 24), 1956, pp. 71–3, claimed that 305 kilograms per head of rural population (which according to Chu would provide 270 kilograms for consumption) was inadequate.

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[More information](#)*The nature of China's grain problem in the 1950s*Table 3. *Distribution of grain production\* per head of rural population by hsien, 1951-52*

Grain output per head of rural population (kg)	Number of <i>hsien</i>	Rural population (million)	Percentage of rural population	Percentage of national grain output
750+	107	15.02	3.00	8.5
500.5-750	145	28.58	5.63	10.8
400.5-500	257	55.92	11.13	14.8
300.5-400	523	122.75	24.43	25.4
200.5-300	834	208.02	41.42	32.6
Under 200	343	72.01	14.34	7.9
	2209	502.30		

\* This was said to refer to the 'usual' level of production in each *hsien*.

Source: Li Ch'eng-jui, *Chung-hua Jen-min Kung-ho-kuo Nung-yeh Shui Shih-kao (History of Agricultural Taxation in the Chinese People's Republic)* (Peking, 1959), p. 134.

per head (giving 1900-2100 calories per day) peasants might be expected to sell grain on a voluntary basis and this level is adopted as the beginning of the 'surplus' category.

Unfortunately, the figures which form the basis of Table 3 could not be grouped in these categories, but nevertheless they show that *at least* 72 million people were in considerable deficit, with under 200 kilograms per head, and that approximately 280 million people (56 per cent of China's rural population) were *not* in surplus. At the top end of the scale, Table 3 also shows that there were 107 *hsien* in which 15 million peasants produced, on average, more than 750 kilograms per head. Undoubtedly the bulk of surpluses would be expected from the 509 *hsien* where 95.5 million people produced over 400 kilograms per head, although some would also be forthcoming from the 122.7 million people in the 300-400 kilogram band.

It would probably be impossible for even a large team of research workers to discover enough data to map the figures in Table 2 for China's 2200 *hsien*, and an attempt to chart the geographical distribution of grain output has therefore been largely limited to the province and special district levels of administration. Data have, however, been discovered which enable two detailed studies of inequality at the *hsien* level to be presented, and they undoubtedly highlight problems that were widespread throughout China.

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[More information](#)*Rural inequality of grain output*Table 4. *Inequality of grain output per head of rural population, averages for 1952-57 (kilograms of unhusked grain)*

Province (ranked highest to lowest)	Output per head (kilograms)	Average size of rural population (million)	Average annual grain output (million tons)	Rank in output	Percent of national output
1. Heilungkiang	905	8.640	7.818	10	4.4
2. Kirin	656	8.525	5.592	14	3.1
3. Inner Mongolia	521	6.920	3.602	22	2.0
4. Tientsin	475	0.385	0.183	25	0.1
5. Kiangsi	402	15.440	6.204	13	3.5
6. Sinkiang	396	4.643	1.838	23	1.0
7. Liaoning	389	16.070	6.245	12	3.5
8. Hupei	370	25.270	9.342	8	5.2
9. Chekiang	359	20.633	7.405	11	4.1
10. Kwangtung	356	30.885	10.993	5	6.2
Fukien	356	11.300	4.024	20	2.3
12. Anhwei	348	28.943	10.076	7	5.6
13. Kansu	340	12.082	4.105	19	2.3
China average	339	526.535	178.293		
14. Yunnan	338	16.443	5.561	15	3.1
15. Hunan	334	31.390	10.472	6	5.9
16. Shensi	327	14.378	4.698	17	2.6
17. Kwangsi	326	16.850	5.486	16	3.1
18. Szechuan	320	62.748	20.076	1	11.3
19. Kiangsu	314	37.772	11.872	4	6.7
20. Shansi	302	13.183	3.985	21	2.2
21. Tsinghai	301	1.699	0.512	24	0.3
22. Kweichow	300	14.332	4.298	18	2.4
23. Honan	277	43.005	11.892	3	6.7
24. Shantung	272	47.862	13.000	2	7.3
25. Hopei	245	36.103	8.840	9	5.0
26. Peking	200	0.664	0.133	26	0.1
27. Shanghai	111	0.370	0.041	27	negligible

*Source:* Appendices 2 and 3.*The provincial distribution of production per head of rural population*

Figures in Table 4 show the average annual production of grain per head of rural population during the six years 1952-57 and the relative importance of the twenty-seven provinces (and large cities) as grain producers. Three points must be made about the data in Table 4.

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First, excluding the tiny rural populations and production of Peking and Shanghai, there was more than a threefold difference between the highest provincial output per head (Heilungkiang) and the lowest (Hopei): in other words, production per head in Hopei was only 27 per cent of that in Heilungkiang.

Secondly, even at this early stage in the discussion, without reference either to the size and distribution of urban population or to the extent of annual output fluctuations, these provincial averages indicate that large potential rural surpluses clearly existed in many provinces, for no less than nineteen of them had levels of per capita output above the 'surplus' level of 310 kilograms.

Thirdly, and equally clear, is the evidence suggesting that little or no potential surplus would be available in the rural sectors of Honan, Hopei and Shantung, with average levels of output per head around or below the 'deficit' level of 275 kilograms.

These figures, however, only indicate broadly the extent of the margin above subsistence which existed in each province's rural sector. The need for grain transfers between rural areas of the same province, and the opportunity to make such transfers, depended on the degree of production inequality within each province. Some evidence of this must now be examined.

*Sub-provincial distribution of grain production per head of rural population**Special District data*

In 1957 China had 180 Special Districts (the exact figure depends on how self-governing cities are counted) each with an average rural population of around 3 million. There was, however, considerable size variation between provinces. Some, for example Szechuan, had Special Districts with 6–8 million rural inhabitants, while some Special Districts in Kansu and Fukien had rural populations of under 2 million. Special District data relating to grain production and population are difficult to find in the Chinese source materials. When compiling Table 5, therefore, the main aim was to provide as good a sample as possible, covering China's major geographical areas. In particular a great effort was made to include most of the provinces in which China's important 'mini-granaries' or 'commercial (i.e. sur-

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*Rural inequality of grain output*

Table 5. *Inequality of grain output per head of rural population at the Special District level in eleven provinces, 1952-57*

Province	Special district	Average rural population (million)	Average grain output per head of rural population (kg)	Provincial average grain output per head of rural population (kg)
Kansu	Yinch'uan <sup>a</sup>	0.70	465	
	Changyeh <sup>b</sup>	2.08	400	
	P'ingliang <sup>c</sup>	2.05	392	340
	Tinghsi <sup>d</sup>	2.21	384	
	Wutu <sup>e</sup>	0.89	341	
	Kan-nan <sup>f</sup>	0.30	240	
Shensi	Hanchong <sup>g</sup>	2.12	363	
	Yenan <sup>h</sup>	0.79	270	327
	Yülin <sup>i</sup>	1.45	122	
Hopei <sup>j</sup>	T'angshan	4.28	407	
	Ch'engte	1.92	342	
	Ts'anghsien	4.60	269	
	T'unghsien	3.01	266	245
	Tientsin	3.21	265	(1957: 258)
	Changchiak'ou	3.15	256	
	Paoting	5.65	226	
	Hantan	3.32	212	
	Shihchiachuang	5.80	207	
	Hsingt'ai	3.05	175	
Shansi	Ch'angchih <sup>k</sup>	2.61	440	
	Chin-nan <sup>l</sup>	3.46	298	302
	Ying-pei <sup>m</sup>	1.50	273	
Shantung <sup>o</sup>	Yütze <sup>n</sup>	3.10	262	
	Laiyang	7.40	356	
	Changwei	7.81	332	
	Tsining	4.68	331	272
	Taian	4.79	303	(1956: 295)
	Hweimin	6.23	288	
	Liaoch'eng	6.71	279	
	Hotseh	4.83	278	
	Linyi	6.33	267	
	Hunan <sup>p</sup>	Ch'angte	6.14	392
Hsiangt'an		6.81	379	
Hsiang-nan		7.82	333	334
Ch'ienyang		2.34	309	(1952: 341)
Hsianghsi		1.59	281	
Anhui	Shaoyang	5.73	263	
	Wuhu <sup>q</sup>	5.00	500	
	Anking <sup>r</sup>	4.58	368	348
Kiangsu	Fouyang <sup>s</sup>	7.60	257	(1956: 372)
	Soochow <sup>t</sup>	5.11	486	
	Sungkiang <sup>u</sup>	2.30	468	

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Table 5 (cont.)

Province	Special district	Average rural population (million)	Average grain output per head of rural population (kg)	Provincial average grain output per head of rural population (kg)
Szechuan	Yangchow <sup>v</sup>	6.58	296	314
	Yench'eng <sup>w</sup>	3.99	289	(1956: 308)
	Hsüchow <sup>x</sup>	4.65	254	
	Nant'ung <sup>y</sup>	5.42	206	
	Hwaiyin <sup>z</sup>	5.23	183	
	Wenchiang <sup>aa</sup>	4.63	435	
	Chiangchin <sup>bb</sup>	6.02	373	
	Neichiang <sup>cc</sup>	5.32	337	320
	Suining <sup>dd</sup>	6.75	266	
	Yaan <sup>ee</sup>	0.89	242	
Fukien <sup>hh</sup>	Hsichang <sup>ff</sup>	1.29	203	
	Nanch'ung <sup>gg</sup>	8.10	191	
	Nanp'ing	1.63	551	
	Lungch'i	1.50	529	
	Fuan	1.65	338	356
	Minhou	1.76	321	(1957: 374)
	Chinchiang	4.37	300	
Kwangtung	Lungyen	2.04	282	
	Fatshan <sup>ii</sup>	4.18	487	
	Swatow <sup>jj</sup>	6.10	384	356
	Hainan <sup>kk</sup>	2.50	284	
	'N. Kwangtung' <sup>ll</sup> (inc. Chaokuan)	3.50	226	

*Notes*

- a Average for 1952, 1955 and 1956.  
b Average for 1952, 1953 and 1957.  
c Average for 1952, 1955, 1956 and 1957.  
d 1957.  
e Average for 1955, 1956 and 1957.  
f Average for 1952, 1955 and 1957.  
g 1957.  
h Average for 1952 and 1957.  
i Average for 1954, 1955 and 1957.  
j All Hopei figures are for 1957.  
k Average for 1956 and 1957.  
l Average for 1952, 1955 and 1956.  
m Average for 1953-57.  
n Average for 1955 and 1956.  
o All Shantung figures are for 1956.  
p All Hunan figures are for 1952.  
q 1956.  
r 1956.



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[More information](#)*Rural inequality of grain output*

plus) grain bases' were located and also those in which China's poorest Districts were to be found.<sup>6</sup>

Having identified these provinces, every effort was made to discover the range of per capita output between the richest and poorest Special District of each province. Some evidence was collected for eleven provinces, including a complete breakdown for all the Special Districts of four provinces. In general, data for rich Districts were more easily discovered than data for the very poor areas.<sup>7</sup>

The figures in Table 5 show (1) that potentially surplus Districts with very high levels of grain output per head existed in provinces where the *average* output per head was not particularly high (for example, Kiangsu and Szechuan); (2) that some Special Districts involving millions of people were, by any standards, very poor in grain,

<sup>6</sup> An excellent discussion of China's grain problem which includes a list of both mini-granaries and very poor areas is given by Wang Kuang-wei (Vice-Chairman of the State Planning Commission), 'Several Views on the Development of Agriculture', *HH* (no. 17), 1957, pp. 25-8.

<sup>7</sup> For example, no data were found for the low output districts of northern Anhwei.

*Notes to Table 5 (cont.)*

s Average for 1953-56.

t 1956.

u 1956.

v 1956.

w Average for 1955 and 1957.

x Average for 1952, 1955 and 1956.

y 1956.

z 1956.

aa Average for 1952, 1956 and 1957.

bb Average for 1952-56.

cc Average for 1952 and 1957.

dd Average for 1952 and 1957.

ee Average for 1952, 1955 and 1957.

ff 1957.

gg 1957.

hh All figures for Fukien are for 1957 except Minhou (average for 1954 and 1955).

ii Average for 1952-57.

jj 1957.

kk Average for 1952, 1954, 1955 and 1956.

ll 1955.

Percentage of provincial rural population covered by sample of Special Districts: Kansu 64%; Shensi 30%; Hopei 100%; Shansi 80%; Shantung 100%; Hunan 100%; Anhwei 59%; Kiangsu 85%; Szechuan 52%; Fukien 100%; Kwantung 53%.

Source: Appendix 4.

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and (3) that in many provinces studied there was clear evidence of a need for considerable rural redistribution of grain between Special Districts. However, in Shantung, Hunan, Fukien and perhaps Kansu this was not so clear, from the available evidence.

The Special District data reveal great inequality between rural areas in Shensi and Kiangsu. Average output per head of rural population in the richest District of Shensi recorded in Table 4 was almost three times that of the poorest, and in Kiangsu the figure was 2.7 times. In Hopei, Szechuan and Kwangtung the richest District produced more than double the amount per head in the poorest, and in all the provinces listed, except Fukien, the poorest District was in the deficit category (with output below 275 kilograms per head). Rich 'mini-granaries' with per capita output even exceeding 350 kilograms existed in all eleven provinces, including the generally poor province of Hopei. Among the poor Districts, Yülin District of North Shensi (with 1.5 million rural population), stands out as an area of extreme poverty,<sup>8</sup> with average output around 122 kilograms per head. Fairly poor Districts, with average output near to 200 kilograms per head, existed in Hopei, where 12 million people in three such Districts produced an average of exactly 200 kilograms; in Kiangsu, where 10.7 million people produced, on average, 195 kilograms; and in two Szechuan Districts of 9.4 million rural inhabitants, with an average output of 193 kilograms per head. By far the most uniformly poor province among the eleven listed in Table 5 was Hopei. No less than eight out of its ten Special Districts were below the self-sufficiency level of per capita output (275 kilograms) in 1957, and these involved a rural population of 31.8 million.

*Hsien (county) data*

Although the Special District data provide valuable evidence of the relative levels of poverty and wealth, in grain, within the different provinces, they nevertheless cover populations that are still large enough to obscure wide rural inequalities. Shantung province is a good example of this. Average grain output during the good year of 1956 was 295 kilograms per head of rural population (totalling 49 million): that is, the higher end of the self-sufficiency range (275–309 kilograms). Complete figures for all the province's Special Districts

<sup>8</sup> This District produced only 46 kilograms per head in 1951: Wang Ch'eng-ching, *Shen-hsi T'u-ti Li-yung Wen-t'i (Problems of Land Use in Shensi)* (Shanghai, 1956), p. 22.