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The China Quarterly, No. 137 (Mar., 1994), 63-98.

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The Political Economy of Cropping in Maoist and Dengist China: Hebei Province and Shulu County, 1949–90*

Marc Blecher and Wang Shaoguang

Chinese state socialism has, for many years, politicized what crops the country's farmers plant. By doing so, it has transformed the agriculture radically and repeatedly. The state has adopted some strikingly different policy directions and modalities during both the Maoist and Dengist periods. Cleavages between the state and rural society have been opened, closed and re-opened more than once. The political importance and role of intermediate levels of the Chinese state – in particular, provincial and county governments – in affecting policy, mediating between society and the central state, and pursuing their own interests has long been sensed by scholars and Chinese politicians. But they remain largely unspecified.¹

Cropping regulation is a fruitful policy arena for studying state–society and intra-state, Centre–locality politics. It involves a very direct, and substantively and existentially vital, interface among them, in which farmers and local governments have been very active. This article analyses this issue by focusing on the politics and policy dynamics of cropping regulation in Hebei province and Shulu county from 1949 to 1990. Cropping is also an arena which has been studied before by economists interested in Chinese development policy and allocative efficiency.² Their work provides a useful foundation for political analysis, not only because it has charted the ebbs and flows of policy, but also because it has pointed in a general way toward the centrality of politics, particularly at levels below Beijing.³

* This article draws upon field research conducted in Shulu by the authors and several others – Stephen Andors, the late Phyllis Andors, Mitch Meisner and Vivienne Shue – from 1979 to the present. It has been funded by two grants from the U.S. National Endowment for the Humanities, the Ford Foundation, Cornell University, Michigan State University, Oberlin College and Yale University, for which the authors express their gratitude. Li Ning and Yue Ming provided valuable research assistance at various stages. We also thank the Chinese People's Association for Friendship with Foreign Countries and Shulu County People's Government for their invaluable assistance in arranging and hosting the field work over this extended period.

1. By contrast, the role of grassroots political leaders has been extensively analysed.

2. Some prominent examples are: Nicholas Lardy, "State intervention and peasant opportunities," in William L. Parish (ed.), *Chinese Rural Development: The Great Transformation* (Armonk, N.Y.: M. E. Sharpe, 1985); and *Agriculture in China's Economic Development* (Cambridge: Cambridge University Press, 1983); Thomas P. Lyons, *Economic Integration and Planning in Maoist China* (New York: Columbia University Press, 1987); Terry Sicular, "Agricultural planning and pricing in the post-Mao period," *The China Quarterly*, No. 116 (December 1988), pp. 693–95.

3. Terry Sicular writes: "Economic signals sent out by the central government can differ from those received by farmers. Intermediate levels of government filter and modify signals sent by the centre. Local officials adopt policies selectively, often emphasizing those measures that benefit the local government and ignoring those that do not. Local leaders also continue directly to intervene in production and marketing, thus constraining farmers' range of choices.

There are several questions to illuminate. How and why have policies to regulate cropping changed? When and in what respects have the Centre, the regional governments and the farmers been more and less effective? In particular, when and how have Shulu farmers and county and provincial governments gained latitude to pursue their own interests, and how have they used it? What have been the specific roles, levers and constraints facing each of the actors? How have the politics of cropping changed over time, where do they now stand, and what are the implications of this for the foreseeable future?

One major finding has to do with *policy* in the Maoist and Dengist periods. Contrary to some caricatures of the Maoist period as unmitigatedly opposed to material incentives and comparative advantage, there were significant moments in which incentive pricing was used by the state to reach its cropping objectives, and in which the policy of “taking grain as the key link” was compatible with crop specialization based on comparative advantage. It was the radicalization of the “key link” policy, rather than the policy itself, that was ultimately corrosive of comparative advantage cropping and allocative efficiency. Likewise, the Dengist period has not been one of simple liberalization of cropping decisions. In fact, a dialectic developed in which liberalization created problems that led to a return to mandatory planning. Thus, these two periods, so often painted as polar opposites, in fact have some cropping policies in common.

Another conclusion is concerned with the *politics* of cropping. In both the Maoist and Dengist periods a politics grew up around cropping involving significant roles for the central government, intermediate (provincial and county) governments and farmers. The effect of the Dengist reforms has not been, then, to bring new actors into the political arena or even necessarily to enliven it. Rather, the reforms have made those politics more complex by creating new pressures and constraints on, and raising the stakes for, the central government, the intermediate governments and the farmers. Reform has also reduced the capacity of the state as a whole to regulate effectively the farmers’ cropping activity. But within this context, the capacity of the Centre to regulate cropping has declined, and that of intermediate governments has expanded. Meanwhile, farmers are becoming discontent with state cropping policy. Thus, a firm or clear resolution of the cropping question, as occurred in the Maoist period with the decade-long triumph of the Centre’s policy of self-reliance and draconian control, seems unlikely. And the possibility of popular policy resistance and perhaps even political activism is now greater than it proved to be at the end of the Maoist period. Dengism’s adolescence or middle-age may prove much rockier than its infancy.

footnote continued

The effects of changes in prices and incentives, then, depends not only on farm response but also on the response of local governments. Local government reactions must therefore be taken into account when formulating price and incentive policies.” (“Agricultural planning,” p. 703.)

The Historical and Material Settings

Shulu county⁴ lies 60 kilometres east of Shijiazhuang, the capital of Hebei province. Like the rest of the north China plain, it is an area of high population density, extensive agriculture and unspectacular natural endowment. It has had little in the way of “model” units, and even the provincial press has rarely mentioned it in covering political debates and movements relating to the countryside. Taking 1978 – the last year of the Maoist period – as a benchmark, Table 1 shows that in many respects Shulu was within the very broad range of regional or national averages.

Two features stand out. Shulu was the most industrially advanced county in Shijiazhuang prefecture.⁵ More significant, it had a historical and contemporary specialization in cotton production. This makes it an excellent site for studying conflicts over cropping. Shulu lies in that portion of the north China plain where cotton has been a major traditional crop since the 16th century.⁶ In the middle of the 18th century, cotton occupied 20 to 30 per cent of arable land in Hebei.⁷ By the turn of the 20th century, despite a general decline of cotton in Hebei,⁸ Shulu farmers were still growing cotton on about 30 per cent of their land.⁹ In 1935, cotton occupied 28 per cent of cultivated land, and accounted for 29.3 per cent of the output value of all crops.¹⁰ In 1979 Shulu was designated a cotton production base area by Hebei province planners. By 1986, it was one of five of Hebei’s 140 counties devoting more than 300,000 *mou* (20,100 ha.) of cultivated land to cotton. In terms of total output of cotton, Shulu ranked first in the province.¹¹ For this reason, it was

4. In 1986 Shulu county was redesignated a municipality (*shi*), and renamed after its central town of Xinji. This occurred under a national policy of indentifying rural counties that had been relatively successful industrializers as prospective centres of further growth in their regions. The redesignation did not appear to be the effect or the cause of any special state assistance, nor did it involve any boundary changes or perceptible changes in administrative relationships or power vis-à-vis higher or lower levels of the political system. But for the sake of historical continuity and expository simplicity, we will refer to it as Shulu county throughout.

5. This is discussed in Marc Blecher and Vivienne Shue, *Tethered Deer: Government and Economy in a Chinese County* (Stanford: Stanford University Press, forthcoming).

6. Philip C. C. Huang, *The Peasant Economy and Social Change in North China* (Stanford: Stanford University Press, 1985), pp. 111–120 and 125–137.

7. Ramon Myers, *The Chinese Peasant Economy: Agricultural Development in Hopei and Shantung, 1890–1949* (Cambridge, Mass.: Harvard University Press, 1970), p. 179.

8. By this time cotton was a minor crop occupying 1 or 2% of arable land. (*Hebei jingji shouce* (*Handbook of Hebei Economy*; hereafter *HBSC*) (Shijiazhuang: Hebei renmin chubanshe, 1986), p. 264; Huang, *The Peasant Economy*, p. 128.) Huang’s estimate is based on Richard A. Kraus, *Cotton and Cotton Goods in China, 1918–1936* (New York: Garland, 1980). Yet it accords almost exactly with that of the *Hebei jingji shouce*. But none of these three sources offers any explanation of this huge change in the fortunes of Hebei cotton by the late Qing.

9. Li Zhonggui and Zhang Fengtai, *Shulu xiang tuzhi* (*Local Gazetteer of Shulu*) (1906), 12 *juan*, pp. 35–37.

10. “Hebei sheng Shulu xian difang shiji qingkuang diaocha baogao” (“Report of an investigation into the actual conditions in Shulu county, Hebei province”), in *Jicha diaocha tongji congkan*, Vol. II, No. 3 (1936), p. 110. Thanks to Kathleen Hartford for referring us to this source and supplying a copy.

11. Hebei Provincial Statistics Bureau (ed.) *Hebei tongji nianjian 1987* (Hebei Statistical Yearbook; hereafter *HBNJ*) (Beijing: Chinese Statistics Press, 1987), pp. 463–485.

Table 1: Basic Statistics on Shulu County, Shijiazhuang Prefecture, Hebei Province, and China, 1978*

	Shulu county	Shijiazhuang prefecture	Hebei province	China
Total population per ha. of cultivated land	7.3	9.3	7.5	10.0
Grain production (kg.) per capita	439	473	337	318
Grain land productivity (tons/ha., 1980)	2.63	—	2.22	3.00
Cotton production (kg.) per capita	10.6	5.3	2.0	2.1
Cotton land productivity (kg./ha.), 1980	485	—	450	555
Gross value of agricultural output (<i>yuan</i>) per capita	240	221	196	120
Gross value of industrial output (<i>yuan</i>) per capita	> 302	142	388	445
Rural collective distributed income (<i>yuan</i>) per capita	88.40	84.50	75.70	74.00

Note:
*Except for grain and cotton land productivity data, where the year is 1980.

designated as one of 50 “high quality cotton production bases” in the whole nation in the same year.¹²

Putting Shulu in the context of Hebei province presents a striking contrast. Cotton cultivation throughout the province has been both more volatile and less important than in Shulu. In 1900, cotton was a marginal crop, occupying only about 100,500 ha.¹³ By 1937, with the rise of China’s textile industry, cotton sown area in Hebei had risen to 927,950 ha., accounting for more than 10 per cent of total cultivated area in the province,¹⁴ though probably still much smaller a percentage than in Shulu. In the 1950s the average increased slightly to 982,220 ha., but by 1978 it had fallen back to only 579,500 ha. The following years witnessed a phenomenal recovery. Cotton’s share of cultivated area nearly doubled, from 8.6 per cent in 1978 to 15.8 per cent in 1984. Even after a precipitous fall in the subsequent two years, cotton sown area was still 22.7 per cent higher than the figure of 1978.

12. *Hebei ribao* (*Hebei Daily News*), 24 August 1986.
13. See n. 8.
14. *HBSC*, p. 264; Huang, *The Peasant Economy*, p. 128.

State Regulation of Cropping in the Maoist Period

The First Five-Year Plan. In the early 1950s, Hebei farmers were still able to make their own decisions about cropping patterns and levels of input use. State intervention in the production of farm crops was then quite modest. The state did set certain minimum price ratios between individual commercial crops and the major grain crop of each region.¹⁵ But prices of cereal crops were determined by markets. This strategy quickly promoted cotton production, which was desired by the state. By 1952, Hebei exceeded its pre-war records in cotton sown area (by 5.4 per cent) and output (by 210 per cent). Meanwhile grain production increased rapidly (see Figure 2).

Compulsory delivery quotas for agricultural products were instituted in 1953–57. But farmers were still allowed to sell surplus farm products in rural markets. Thus the 1949–52 Hebei trends in cropping continued between 1953 and 1956. In 1955, output of cotton and oil-bearing crops in the province reached records which would not be exceeded until the 1980s. Cotton's share of total sown area hit an all-time high in 1956, and oil-bearing crops' share also set a record which would not be exceeded until 1980 (Figures 1–3). Because of these specializations, Hebei was a net importer of grain during the First Five-Year Plan, averaging 838,000 metric tons annually (Table 2). These imports peaked sharply in 1956, at the same time as cotton sown area.¹⁶

But the political changes associated with the high tide of collectivization brought a broad attack on a private commerce. In the spring of 1957, several months in advance of a similar national move taken in August,¹⁷ the Hebei provincial government tightened regulations on rural markets. Private transactions in grain, edible vegetable oil seeds and cotton were prohibited.¹⁸ The state became a true monopsonist and monopolist. This put it in a much better position to force farmers to follow its cropping plans. For example, by refusing to purchase cotton or to supply grain to regions specializing in cotton, the state effectively compelled farmers to

15. For instance, the Hebei provincial government announced on 21 September 1949 that in no place should the price of one *jin* of standard cotton be lower than that of nine *jin* of millet (HBSC, p. 737).

16. Kenneth Walker also found significant levels of Hebei grain imports for this period, though he delineates a somewhat different set of data based on his survey of contemporary reports in the *Hebei ribao* (*Hebei Daily News*): 1953 – 598,000 metric tons; 1954 – 905,000; 1955 – 1,205,000; 1956 – 2,115,000; 1957 – 750,000. The average is 1,114,000 metric tons, significantly higher than the 838,000 given by the HBSC data set reported in Table 2. See Kenneth Walker, *Food Grain Procurement and Consumption in China* (Cambridge: Cambridge University Press, 1984), p. 87. The discrepancy between the data sets is not systematic from year to year, and therefore cannot be accounted for by the difference between husked and unhusked equivalents. It remains difficult to reconcile in the absence of more extensive information about the ways in which the statistics were collected and reported in the 1950s and the 1980s. Nevertheless, the point about very large grain imports remains incontrovertible. (It also finds support from Lardy, *Agriculture*, pp. 36, 62.) Both data sets also show that grain imports surged in 1956, the year of peak cotton sown area (until 1980).

17. Lardy, *Agriculture*, p.39.

18. HBSC, p. 748.

Table 2: Hebei Grain Imports and Exports, 1953–83

Year	(Imports)/Exports
1953	(99,000)
1954	(700,500)
1955	(743,500)
1956	(1,920,500)
1957	(726,500)
1958	(305,500)
1959	252,000
1960	(218,000)
1961	(299,500)
1962	(491,500)
1963	(1,463,000)
1964	(1,027,500)
1965	(850,000)
1966	(196,000)
1967	(48,500)
1968	(423,500)
1969	(50,000)
1970	(296,000)
1971	(33,500)
1972	(418,000)
1973	(18,000)
1974	287,500
1975	237,500
1976	(31,000)
1977	(576,000)
1978	(276,000)
1979	235,500
1980	(1,266,500)
1981	(830,000)
1982	(315,000)
1983	500,000

Source:
Hebei jingji shouce (Handbook of Hebei Economy) (Shijiazhuang: Hebei renmin chubanshe, 1986), pp. 413–17,

grow grain. Thus, in 1957, Hebei reached post-1949 highs in grain sown area and production (see Figures 1 and 2).

The Great Leap Forward and its aftermath: “Taking grain as the key link.” In 1958, the people’s commune system was introduced. The state sought to regulate cropping directly (one meaning of the slogan “politics in command”) by imposing specific cultivation plans on producers. Of course the chaos of the Great Leap Forward undercut the ability of the state to control local institutions. As a result, in Hebei area sown to grain plummeted 17.6 per cent from its 1957 peak to its 1960 trough

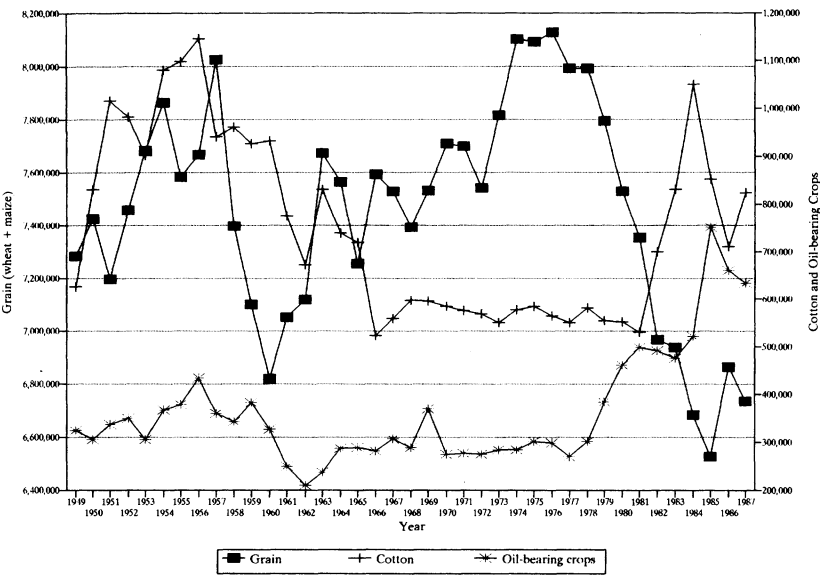


Figure 1: Sown Area of Grain, Cotton and Oil-Bearing Crops, Hebei (ha.), 1949–87

(Figure 1).¹⁹ From 1958 to 1961, per capita grain supplies fell from 227 to 156 kg., due partly to falling production (Figure 2) and partly to reduced imports. As the number one cotton producing province in the nation, Hebei had been an importer of grain throughout the 1950s. In the four years immediately before the Great Leap Forward, the province imported on average 1,215,000 tons of grain per year. But because of the nation-wide food shortage, grain imports from other provinces averaged only 97,360 tons during the disaster period between 1959 and 1961, around one-twelfth the 1954–57 average (see Table 2). By 1961 the food supply crisis forced a spontaneous flight by farmers back into grain production (Figure 1). The Great Leap Forward demonstrated to Hebei officials and farmers that dependence upon outside suppliers could have disastrous consequences.

It was against this background that the policy of “taking grain as the

19. Nationally, grain sown area dropped only 9.4% from 1957 to 1959, and then actually recovered 5% in 1960 before dropping again to roughly 1959 levels through 1965. National Statistics Bureau (ed.), *Zhongguo tongji nianjian-1981 (Statistical Yearbook of China; hereafter ZGNJ)* (Beijing: Chinese Statistics Press, 1982), p. 138. The reasons for the much sharper drop in Hebei cannot be determined definitively on the basis of the present research. Figure 1 indicates that the drop in grain sown area was not the result of displacement by key cash crops (although cotton and, to a lesser extent, oil-bearing crop areas were held roughly steady in these years of declining grain). Rather, the land taken out of grain in this period seems to have disappeared from agriculture. This suggests the possibility that Hebei was more subject than China as a whole to the manias for farmland infrastructure projects and rural industrialization, which would have drawn off the labour needed to plant and tend crops.

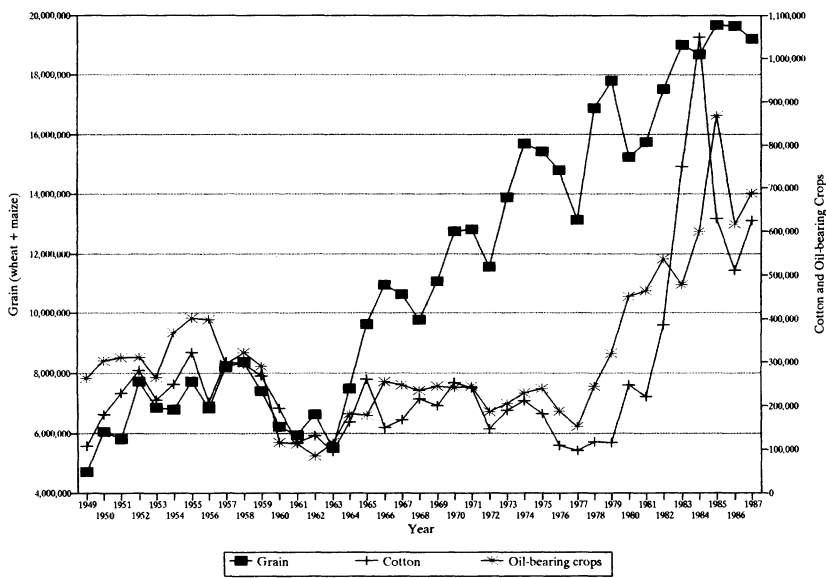


Figure 2: Output of Grain, Cotton and Oil-Bearing Crops, Hebei (tons), 1949–87

key link” (*yi liang wei gang*) began to be implemented nationally as well as in Hebei province. However, grain area in the province rose only marginally (1.8 per cent) from 1962 to 1965. Up to 1966 cotton production in Hebei was not hurt too much by the new policy, because while the state stressed grain production, it also relaxed its regulation of production and marketing in order to stimulate output. As a result of Chen Yun’s efforts, “taking grain as the key link” was often interpreted as a policy to accentuate development of grain production and marketing in “high and stable-yield grain areas.”²⁰ Thus specialized production of cotton and other economic crops did not necessarily contradict the state’s general policy. In fact, in 1961 it returned to a practice, used as early as 1956, of employing material incentive programmes for commercial crop farmers. Cotton producers, for instance, were to be guaranteed food supplies no less than the average for nearby grain producers, in addition to other material rewards.²¹ This, taken together with the organizational

20. Lardy, “State intervention,” pp. 42–43.
21. Central Committee of the Chinese Communist Party, “Guanyu shougou zhongyao jingji zuowu shixing liangshi jiangli de zhishi” (“Directive on the implementation of grain incentives for procurement of important cash crops”), 3 April 1961; Mei Fangquan, “Woguo liangshi he mianhua wenbu xietiao fazhan wenti de yanjiu” (“A research note on the question of steady and balanced development of grain and cotton [production]”), *Nongye jingji wenti* (*Problems of Agricultural Economics*), 1988, p. 22. There is no way of ascertaining the extent to which this policy was implemented in Hebei or anywhere else; certainly, it would have been extremely difficult to do so as long as grain remained in very short supply.

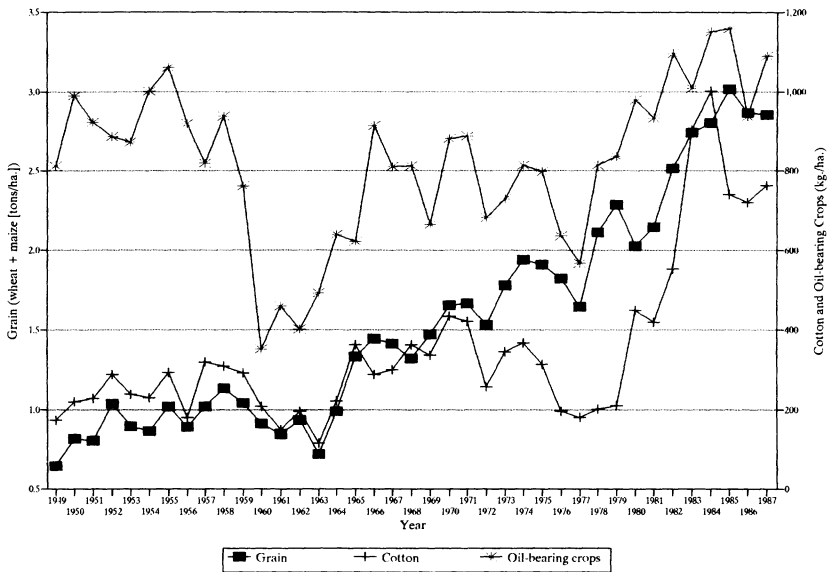


Figure 3: Yield of Grain, Cotton and Oil-Bearing Crops, Hebei, 1949–87

changes that increased the direct producers' latitude over cropping and the return of rural marketing, made commercial crop production attractive. Thus, despite the government cropping policy's emphasis on grain production, grain sown area in the nation actually *declined* 1.7 per cent between 1962 and 1965, while cotton and oil-bearing crop sown area expanded (43 and 44 per cent respectively).²² And output of cotton and oil-bearing crops increased much faster than that of grain.²³

As a grain-deficient province, Hebei had to try harder than grain-surplus provinces to be lifted out of its more acute grain shortage. Therefore, from 1960 to 1962, grain area in Hebei increased at the expense of cotton area (Figure 1). Nevertheless, thanks to the reduction of state grain procurement quotas²⁴ and vastly increased grain imports from other provinces (Table 2), the decline in cotton area was only 7.2 per cent from 1961 to 1965. Moreover, cotton output doubled between 1962 and 1965, while grain production increased at the slower rate of 45.5 per cent (Figure 2).

Throughout these years, Shulu agriculture also built upon its traditional

22. Statistical Bureau of the People's Republic of China, *China Statistical Yearbook, 1989* (Beijing: Chinese Statistical Information and Consultancy Service Centre, 1990), p. 158.

23. *ZGNJ* 1983, pp. 154–159.

24. These dropped from 44.9% of total output in 1959 to 15.0% in 1962 and 12.3% in '965.

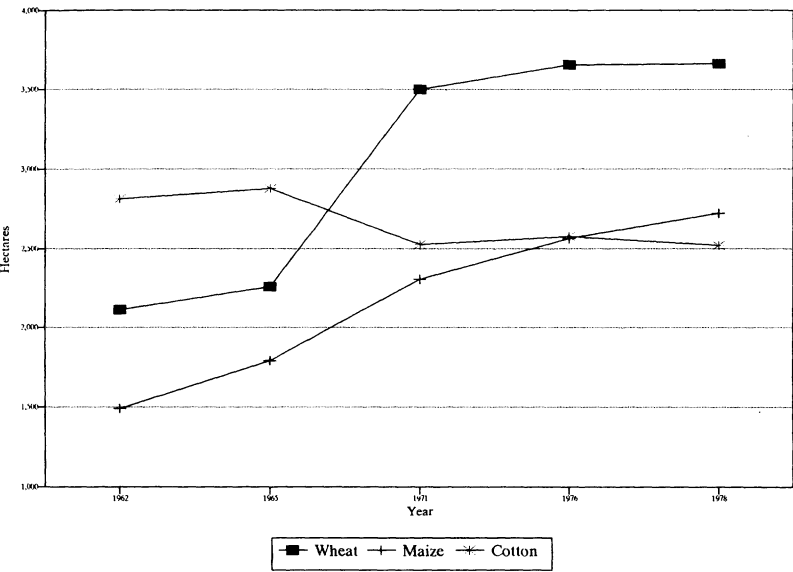


Figure 4: Sown Area of Major Crops, Muqiu, Tianjiazhuang and Fanjiazhuang

strength in cotton. In three sample communes,²⁵ in 1962 cotton was the single largest crop in terms of sown area (Figure 4). Due to those policy and institutional changes discussed above, which were favourable to the persistence and even development of cash crop production, in Shulu the central government's overall emphasis on grain production did not change cropping patterns drastically or undercut cotton production between 1962 and 1965. Grain sown area increased only 12 per cent over the period, while grain cultivated area actually declined 3.4 per cent. This is because grain sown area expanded through increased multicropping, not by displacing cotton. Meanwhile, cotton sown area actually rose 2.2 per cent from 1962 to 1965; and by 1965, cotton still occupied more land than any other single crop in the sample communes (Figure 4).²⁶ Yet even with the reduction in cultivated area, grain production developed at the rapid average annual rate of 15 per cent, higher than the performance of

25. Shulu officials said that, owing to disruptions in statistical work during the Cultural Revolution, time series data were more reliable and readily available for a few communes than for the county as a whole. We requested data for one poor, one middling and one prosperous commune (later redubbed *xiang* (township)). The three selected by county officials – Muqiu, Tianjiazhuang and Fanjiazhuang – do indeed capture that range. They also show some of the geographical variability of rural Shulu: Muqiu is in the historically poor, flood-prone south, Tianjiazhuang is a peri-urban locality adjacent to the county seat of Xinji (into which it was incorporated as the “Western Administrative District” (*cheng xi banshichu*) in 1986), and Fanjiazhuang is in north central Shulu.

26. In fact, its ubiquity even increased: the average ratio of cotton to grain sown land rose from 0.81 in 1962 to 0.86 in 1965.

the province as a whole.²⁷ Thus, Shulu farmers and local government officials could afford to keep a large percentage of their sown land under cotton.

Thus, for Hebei and particularly for Shulu, the policy of “taking grain as the key link” was modulated by policies liberalizing market exchange and expanding the autonomy of direct producers between 1962 and 1965. Therefore cropping patterns which Hebei and Shulu farmers and government officials preferred, and which reflected the province’s and county’s historical specialization, did not suffer significant negative effects. Neither did food production or consumption.

The Cultural Revolution decade: From “taking grain as the key link” to “self-reliance.” As the policy of local self-reliance was introduced around 1965–66 and given great emphasis thereafter, “taking grain as the key link” began to be interpreted as meaning local and regional self-reliance (*zili gengsheng*) in grain. This would have negative effects on areas with favourable conditions for production of cash crops, including parts of Hebei such as Shulu. Yet in Shulu it would set in motion a dialectic in which success in meeting the goals of the policy would within the space of six years create the conditions for a partial return to a cropping pattern preferred by county leaders and farmers.

After the concept of self-reliance became a national policy goal, substantial reallocations of resources contrary to comparative advantage took place.²⁸ While those units of production and governance already self-sufficient in grain were still permitted to diversify, grain-deficient areas were forced to undertake “backward specialization,” shifting land more suitable for the production of cash crops to inefficient production of grain. The shift in cropping patterns between 1965 and 1970 was probably one of the most dramatic changes of this kind over a short period in Chinese history. National-level data do not reveal the enormity of the change. Grain’s share of sown area only fluctuated between 82.3 per cent and 83.5 per cent from 1965 to 1971, and between 80.3 per cent and 81.9 per cent from 1972 to 1979. Meanwhile cotton’s share vacillated between 3.0 and 3.5 per cent over the entire period.²⁹ But below the national level the transformation of cropping patterns was profound. In the 1960s and 1970s, the centre of gravity of China’s cotton production shifted from the north to the south, particularly to the provinces in the middle and lower Yangzi River valley. In the 1950s, they produced only 28 per cent of the national cotton output; by the 1960s and 1970s, they produced about 50 per cent. In the meantime, however, the share of Hebei, Shandong and Henan declined from well above 40 per cent to around 30 per cent of national production.³⁰

While the Maoist leadership often implemented its policy initiatives on

27. As a result, grain output per capita was still higher than the provincial average.

28. Lyons, *Economic Integration*.

29. ZGNJ 1983, pp. 154–55.

30. Mei Fangquan, “Research note,” p. 22.

a national basis without reference to local and regional specificities, the attack on cotton was in fact modulated by various regions' degrees of self-sufficiency in grain. Hebei, a traditional grain importer, was hurt more than many other provinces. It began to suffer immediately after the Fifth National Conference on Cotton Production of February 1966, which pronounced: "Cotton-producing areas should follow the guiding principle of 'taking grain as the key link' as well, working hard for big harvests in both cotton and grain."³¹ In that year, cotton sown area and output in Hebei suffered their biggest drops since 1949 (Figures 1 and 2). They would not exceed 1965 levels until 1982–83. In place of cotton, more grain was planted. 1966 witnessed the biggest leap in grain area in Hebei since 1949 (except for the strong recovery in 1964 from disastrous floods of 1963; see Figures 1 and 2).

These sea-changes were effected by the imposition of mandatory plans from the Centre on the province, which in turn passed them on to counties. As in the Great Leap Forward, the political havoc wrought by the Cultural Revolution interfered with the central state's capacity to enforce its policies. Thus Hebei's cotton sown area actually gained at the expense of grain in 1967 and 1968. But as new authorities – revolutionary committees – were established and consolidated in 1968–69, Hebei experienced a steady decline in cotton area in the following five years (Figure 1). At this time an official policy goal for the central government and particularly for the provincial governments in Hebei, Shandong and Henan was to "put an end to the northward transfer of southern grain" (*jieshu nan liang bei diao*). Under direct pressure from Beijing in the form of mandatory area crop quotas, Hebei was forced once again to devote more and more land to grain. From 1968 to 1976, grain sown area increased at an average of 1.21 per cent per year in the province, almost 2.5 times the national rate (0.49 per cent). As a result, Hebei substantially improved its grain supply position, with output increasing from 265 kg. per capita in 1966, lower than the national average, to an above average 336 kg. per capita in 1978.³² As self-sufficiency in grain increased, Hebei imported much less than it did before (or would again). In fact, in 1970, 1974 and 1975 Hebei actually exported significant tonnages of grain to other provinces (Table 2). For a traditionally grain-deficient province, this was a stupendous reversal.³³

A corresponding transformation of cropping patterns occurred in Shulu. But local data reveal dynamics that were more textured and modulated than the aggregate national or provincial data. There are two general ways to increase grain output: increasing sown area, and increasing yield per unit of land. In 1965–71 Shulu adopted what we will call an extensive pattern of grain production, stressing the former, and in 1972–

31. *Zhongguo nongye nianjian 1981* (Yearbook of Chinese Agriculture, hereafter NYNJ) (Beijing: Agriculture Press, 1982), p. 591.

32. Grain yields rose as well, from 1.45 to 2.12 tons/ha.

33. *Renmin ribao*, 1 October 1971 and 10 January 1975.

78 an intensive pattern, stressing the latter.³⁴ The modalities of this shift, and the reasons that it could occur, reveal some of the dynamics of cropping policy and politics in the late Maoist period.

Extensive development of grain production, 1965–71. In the seven years between 1965 and 1971, total grain production in the three sample Shulu communes increased at the very strong average annual rate of 6.9 per cent. The main reason was a 6.2 per cent average annual rate of increase in the amount of land sown to grain, a figure far higher than the country or Hebei province.³⁵ As Kenneth R. Walker has pointed out, “addition to the grain sown area may be obtained (a) by extending the arable area; (b) by raising the multiple cropping index; and (c) by substituting grain for crops such as cotton and tobacco.”³⁶ The first option was out of the question in Shulu, where all arable land was already cultivated.³⁷ The remaining choices were to increase multicropping and/or replace other crops with grain. The minimum multicropping index (MMCI)³⁸ for the three communes rose from 1.20 in 1965 to 1.44 in 1971, exceeding the provincial index of 1.41 (Table 3). But the sharp rise in multiple cropping of grain accounted for only 44 per cent of the expansion of grain sown land. The rest resulted from the displacement of cash crops, particularly cotton, by grain. In all the three sample communes, cotton area declined between 1965 and 1971.³⁹

34. The appearance of an “area-oriented” pattern of grain production in the sample communes in this period corresponds to two similar findings from rather different sources. First, it parallels trends for Shijiazhuang prefecture as a whole (Marc Blecher, “Economic development and distribution in Shijiazhuang prefecture, 1966–78” (unpublished manuscript)). Secondly, it corresponds to a detailed account offered by a knowledgeable former county-level official in Guangdong province (Marc Blecher, interview conducted at Universities Service Center, Hong Kong, 1978). He reported that before 1972 the Dazhai/Xiyang programme of agricultural development emphasized bringing larger amounts of land under cultivation each year, in emulation of Dazhai’s remarkable example of terracing formerly uncultivable mountainsides. According to this same account, after 1972 the emphasis shifted to improving the yields of land already under cultivation.

35. ZGNJ 1983, p. 154.

36. Kenneth R. Walker, “Grain self-sufficiency in North China, 1953–1975,” *The China Quarterly*, No. 71 (September 1977), p. 560.

37. According to Shijiazhuang prefecture officials, the central and south Hebei plains on which Shulu is located were fully cultivated by 1966 (interview, Shijiazhuang Prefecture Planning Commission, 9 July 1979).

38. As indicated at the bottom of Table 3, what we call the “minimum multicropping index” is our calculation, based on dividing the sum of the sown areas of wheat and maize by the total cultivated area of grain. The actual multicropping index for grain may have been slightly higher than this, insofar as it does not take into account sown areas of minor grains for which we do not have data. But since in Shulu wheat and corn make up by far the bulk of grain production, we believe that the differential between the minimum and actual figures is bound to be very small.

39. In addition to cotton, other cash crops must have also been sacrificed to expand grain production. In all the three sample communes, increased grain cultivated area was larger than that deducted from cotton area. Taken together, land taken from cash crops other than cotton contributed about half of the expansion of grain cultivated area in the three communes. Nevertheless, in absolute terms cotton was probably the one crop whose area had been cut most substantially. Here again, the more important cotton had been in 1965, the more in percentage terms the deduction of its area contributed to the expansion of grain cultivated area. Decreased cotton area in Tianjiazhuang accounted for 60% of that expansion, and in

Table 3: Cultivated and Sown Grain Areas (ha.) and Multicrop Indices, 1962–78

Year	Tianjiazhuang	Fanjiazhuang	Muqiu	Total	Hebei average
<i>Grain cultivated area</i>					
1962	1081.4	912.1	1472.9	3466.4	—
1965	1053.6	944.6	1349.4	3347.6	—
1971	1342.7	1155.3	1523.4	4021.3	—
1976	1321.8	1089.5	1454.9	3866.2	—
1978	1328.2	1140.8	1456.9	3925.9	—
<i>Wheat sown area</i>					
1962	713.9	652.2	748.7	2114.9	—
1965	811.2	704.8	741.4	2257.4	—
1971	1249.3	1059.9	1191.5	3500.8	—
1976	1273.0	1065.3	1313.4	3651.7	—
1978	1273.0	1065.3	1322.0	3660.3	—
<i>Maize sown area</i>					
1962	557.5	339.2	596.9	1493.6	—
1965	675.0	424.9	689.4	1789.4	—
1971	813.0	591.5	901.8	2306.3	—
1976	984.4	717.7	862.0	2564.0	—
1978	1009.8	769.6	938.8	2718.2	—
<i>Minimum multicropping index</i>					
1962	1.18	1.09	0.91	1.04	1.29
1965	1.41	1.20	1.06	1.20	1.32
1971	1.54	1.43	1.37	1.44	1.41
1976	1.71	1.64	1.50	1.61	1.57
1978	1.72	1.61	1.55	1.62	1.55

Notes:
Grain cultivated area = Grain output/Grain yield.
Minimum multicropping index = Sown areas of wheat + maize/grain cultivated area.
The actual grain MCI may be higher; see text. Hebei figures are actual grain MCI.

Moreover, the data suggest the possibility of a systematic policy to readjust cropping to meet a standard formula or a quota required of and, therefore, by the county. The higher a commune’s ratio of cotton to grain cultivated land had been in 1965, the deeper was the cut in cotton by 1971.⁴⁰ The index for grain multiple cropping grew at almost the same

footnote continued
Fanjiazhuang 49%. Muqiu, the least cotton-intensive of the three, cut more from oil-bearing crops and other cash crops (60%) than from cotton (40%).
40. Tianjiazhuang’s ratio had been 0.99 in 1965, and 16.6% of cotton land was taken to plant grain in the interval. Muqiu’s ratio of 0.70 had been the lowest among the three, and its loss of cotton land was the smallest (7.5%). Fanjiazhuang’s ratio had been in between the other two (0.94), as was its decline in cotton area (11.6%).

pace (11–13 per cent) in each of the three sample communes between 1965 and 1971. And after the forced deduction of cotton area, the difference among the three communes in the ratio of cotton to grain cultivated land narrowed from between 70 and 99 per cent in 1965 to between 57 per cent and 68 per cent. Even if greater similarity in cropping among these initially rather different communes was not the intent of policy in 1965–71, it certainly was the outcome.

Intensive development of grain production, 1972–78. In 1972–78 grain production in the sample communes increased at an average annual rate of 7.3 per cent per year, which is high when compared with national and provincial figures (4 and 6.5 per cent respectively). The strategy to increase grain production in this period, however, was very different from that of 1965–71. There appeared an intensive pattern of grain cultivation, emphasizing increased production per unit of sown land rather than the amount of that land. Something had changed in the arena of cropping.

The switch was associated with a number of factors. Among the most important was that by 1971 the policy of grain self-reliance had been successful in Shulu. While in 1965 grain production per capita in none of the three sample communes had exceeded the national figure (272 kg.), in 1971 it had done so in all three. Local farmers and officials thus could be in a much better position to bargain with their superiors over land use as long as they were able to keep their good standing in grain production. Of course Shulu farmers and officials would not want to give up more land to grain at the expense of their cash crops. Rather, if possible, they would have preferred to take some land out of grain production to develop them.⁴¹ But in order to pursue their interests in cropping while maintaining grain self-reliance, the Shulu communes all shifted ground by readjusting their allocations of other scarce resources such as labour and fertilizer. Specifically, grain *cultivated* area fell slightly in 1971–78 (Table 3). But grain *sown* area still grew 1.4 per cent per year in 1972–78, far lower than the 6.2 per cent annual increase in 1965–71. This was attained by devoting more labour and materials to grain production in order to keep the grain multicropping index rising (Table 3). But the modest increase in grain sown area could not alone account for the increases in grain output over this period. The rest resulted from 6.9 per cent average annual increases in grain yields,⁴² which came mainly from a 9.7 per cent average annual increase in the application of chemical fertilizer.⁴³ In short, by reallocating their inputs, Shulu county leaders and farmers found a way to fulfil their own interest in freeing cultivated land

41. These are, of course, only assumptions. But we derive them not from some abstract notions about human motivation, but rather from the subsequent behaviour of Shulu farmers in the post-1978 period, analysed below.

42. The average figure for the 1965–71 period of extensive growth was 0.7%.

43. It had increased less than 6% per year in 1965–71. Other factors which were associated with increased grain production in the previous period – greater allocation of labour, more draught animals, and extension of irrigated area – registered no significant changes in this one. There was little room for increasing irrigated area in this period: by 1976, all of Tianjiazhuang's and 99.1% of Fanjiazhuang's land was irrigated, as was 92% of Muqiu's.

for non-grain crops while still meeting the demands of the grain self-reliance policy.⁴⁴

Where did the cultivated land taken from grain go? In a startling departure from their past practice, Shulu farmers did not put it back into cotton. Cotton sown area actually declined slightly in 1972–78. Why did Shulu county leaders and farmers not return to the crop in which they had a comparative advantage at this time? The question is even more puzzling since state purchase prices for cotton rose 13 per cent in 1977 and another 8.9 per cent in 1978.⁴⁵ The reason is that the additional inputs being devoted to increasing grain multicropping and yields absorbed the resources needed for cotton.⁴⁶ Growing cotton has traditionally required much more labour and material inputs than is necessary to grow grain. “Peasants have to plow the land carefully in the fall, fertilize the land more heavily than for grain crops in early winter, irrigate more intensively when sowing seeds, and take special care to weed during the spring and summer months.”⁴⁷ Indeed, during the latter half of the 1980s Shulu farmers were complaining bitterly about cotton production’s arduousness, high cost and riskiness from its proneness to damage from pests, plant diseases, hail, wind and excessive rain.⁴⁸ One indicator of the input constraints facing cotton is its yields, which plummeted from 503 kg./ha. in 1971 to 253 in 1978.

Yet there was a silver lining to the cloud over cotton. The cultivated land taken out of grain was reallocated to oil-bearing and sideline crops such as wolfberry (*gouqi*).⁴⁹ Edible oil was in seriously short supply in Hebei, particularly the rural areas, throughout the 1970s.⁵⁰ And in general sideline crops were not subject to state regulation as strictly as grain and cotton. In other words, despite the political pressures and economic resource constraints under which they continued to find themselves in 1971–78, Shulu farmers and/or county leaders found ways to pursue their own interests on cropping. They could do so precisely because of the political and economic latitude they gained from their success in meeting

44. The increase in chemical fertilizer application was distributed evenly over the three communes during this period. Chemical fertilizer was an important factor in China’s agricultural development at this time; it was also one which was relatively expensive and most subject to control through the state supply system. That these three rather different communes could register such similar increases in this expensive and tightly controlled input suggests a certain evenhandedness or uniformity in the operation of state (in this case, county) policies concerning planning, finance and allocation of chemical fertilizer in a period when it was a centrepiece of agricultural development planning.

45. Calculated from Sicular, “Agricultural planning,” table 3 (p. 687).

46. From 1965 to 1971 chemical fertilizer application to cotton rose 45.5%, faster than that to grain (39.3%). But from 1971 to 1978, the former increased only 37.5% and the latter 91%. Doubtless there was also competition between cotton and grain for other inputs such as capital investment, scientific inputs (such as pesticides, which cotton also requires in particularly high amounts) and labour time.

47. Myers, *The Chinese Peasant Economy*, pp. 179–180.

48. Interviews: Shulu Agricultural Bureau, 30 June 1990; Wangkou township, 4 July 1990.

49. *Hebei sheng Xinji shi jianjie* (A Brief Introduction to Xinji Municipality, Hebei Province), (n.p., September 1987), pp. 8–9.

50. *HBSC* p. 267.

the objectives of the grain self-reliance policy which had been imposed on them after 1965.

Yet when all is said and done, from 1965 to 1978, in the periods of both extensive and intensive growth in grain production, cotton was the sacrificial lamb of the policy of “taking grain as the key link” as it had been reinterpreted after 1965 to mean local grain self-sufficiency. When the extensive strategy was adopted, cotton suffered in terms of area; and when the intensive strategy was implemented, cotton suffered in terms of yields.

Reflections on the political economy of cropping regulation in the Maoist period. Several conclusions emerge from this discussion. First, in terms of policy, “taking grain as the key link” was, when first implemented in Hebei in 1962, consistent with the pursuit of comparative advantage, because cropping plans were formulated flexibly, production teams were able to retain latitude over actual cropping decisions, and inter-regional trade and transfers of grain were still permitted. It was only with the rise of the policy of grain self-reliance in 1965 that real damage began to be done to cotton, the crop in which Hebei and especially Shulu had been historical specialists.

Secondly, the specific modality of the grain self-reliance policy starting in 1965 was mandatory output and cropping quotas. But even this was applied with some flexibility. The Centre was not interested in slashing cash crops just to make every locality produce as much grain as possible. Indeed, the self-reliance policy made it very difficult to move surplus grain between regions. Thus, areas which could achieve grain self-sufficiency were able to plant other crops. This is why in China, as a whole, cotton production generally moved southward, and why by 1971 Shulu was able to stabilize the expansion of grain area. Whether this is more a matter of *policy* or *politics* is difficult to judge. It could be that the grain self-reliance policy was formulated in ways that specified and allowed for the modulation we have seen. It is also possible that the ability of Hebei and Shulu to escape cropping quotas after 1971 was the result of increased bargaining power imparted to them because they had met the goals of the self-reliance policy.

Thirdly, even if crop planning were modulated in this way, localities were still constrained from pursuing their comparative advantage by input scarcities and the continuing demand to maintain grain self-sufficiency. By 1971, when they had achieved grain self-sufficiency, Shulu leaders and/or farmers had some latitude to plant crops they preferred. Yet they were unable to return to their cotton speciality because grain was taking so many of the resources needed by this troublesome and demanding crop.

Finally, though, local leaders’ and farmers’ cropping decisions were not utterly hemmed in by policy or resource constraints, even in the late Maoist period. While they may have been unable to return to cotton, after 1971 they did have room to expand somewhat their cultivation of other cash crops which were less demanding of resources.

Two questions remain. First, why did the Centre choose to use cropping targets when it had other means at its disposal, such as output quotas? The answer is probably that targets on the input side were easier for the state to monitor and enforce. Farmers and grassroots cadres could always find excuses to account for their failure to meet output targets, meanwhile allocating resources to something more desirable to themselves. They had also proved expert at hiding and diverting outputs. With targets on the input side, however, and especially in land, those evasive strategies would not work so well. Evasion would require farmers actually to misallocate land or inputs or to hide crops in the ground,⁵¹ which is far riskier. (As shall be seen, in 1990 the Shulu county government actually undertook to measure the areas sown by farmers to various crops.) This could also backfire in even higher targets of sown area and input application to grain. Thus, the increasingly mandatory planning in cropping could be hypothesized to be the result of the state's calculus of its political economy of control based on a resistance-counter-resistance relationship with farmers.

Secondly, why did provincial and county-level leaderships go along with these policies? After all, under the *financial* system that prevailed in the Maoist period, the county budget was under tightly centralized control.⁵² There was little direct connection between county budgetary revenues and expenditures. For example, the agricultural tax, designated as a source of revenue for the national government, simply passed through the county government. It thus had no financial stake in what crops were to be planted. But county-level officials could be interested in this issue for other reasons. A primary, *political* one was their concern with assuring a basic supply of foodgrain to local residents. This is an essential responsibility of any government, especially a socialist one. It is also one which, as any astute Chinese official is aware, can threaten to destabilize the political system if not attended to in time. Then there is the basic pressure on officials in a hierarchical bureaucratic system to conform to the policies handed down from above. In this period, application to higher levels of the state for relief grain would signal a failure to attain the overriding goal of local economic independence. Adding *administrative* and *political economy* considerations to these political ones, grain could not easily be procured on markets. Thus, provincial and county government officials were structurally induced in several ways into a cropping pattern which assured that local needs could be met with local resources. The state had managed to make the intermediate governments' interests, and perhaps, more reluctantly but realistically, those of the farmers as well consistent with its own. This helps explain its effectiveness in achieving the goals of its cropping policy in the Maoist period. It would not be so effective thereafter.

51. Sicular, "Agricultural planning," pp. 677, 691.

52. See Vivienne Shue, "Beyond the budget: finance organization and reform in a Chinese county," *Modern China*, Vol. 10, No. 2 (April 1984), pp. 150–166; Blecher and Shue, *Tethered Deer*, ch. 4.

The Post-Maoist Period: From Regulating Conduct to Regulating Outcome and Back Again

In 1979 the Chinese government switched its cropping policy from “taking grain as the key link” to encouraging more specialization in line with comparative advantage. In many ways, the changes introduced by the Third Plenum of December 1978 resemble those adopted in the “economic adjustment” period of 1962–65. First, the state forbade infringement by higher authorities on the rights of commune sub-units, especially the production teams. It was decided that, on the promise that production teams were “accepting the plans and directions of the state,” they had “the right to raise crops in a manner and timing suitable to local conditions.”⁵³ This was not a licence for completely deregulated cropping, of course. Nevertheless, direct producers were entitled to greater autonomy than before, at least in theory. Secondly, the government substantially raised its procurement prices for farm products.⁵⁴ Thirdly, state procurement quotas were stabilized and reduced somewhat, based upon 1971–75 average procurements for each locality.⁵⁵ Starting in 1978, grain and cotton imports were increased in the hope that reduced procurement quotas would provide an added incentive for farmers to increase production and sales in long run.⁵⁶ Fourthly, the state sanctioned the reopening of rural markets. Private sale of all agricultural products except cotton and handicrafts was once again permitted after state delivery responsibilities were fulfilled, although grain trade remained closely supervised. Finally, the household responsibility system, perhaps the single most important rural reform, was not in fact sanctioned by the Third Plenum; but neither was it precluded, and it soon spread in many parts of the country.⁵⁷

The state expected that these policy changes would bring about higher labour and land productivity and more efficient allocation of land and other resources. In the first few years of the rural reforms, farmers’ response was indeed positive: output of key crops registered rapid growth, and many localities reverted to traditional cropping patterns.

53. Zhao Dexin, *Zhonghua renmin gongheguo jingji shi, 1967–1984 (The Economic History of the People’s Republic of China, 1967–1984)* (Zhengzhou: Henan renmin chubanshe, 1989), p. 415.

54. Grain quota purchase prices were increased 20%, beginning with the summer harvest of 1979, with an additional 50% premium for above-quota sales. Purchase prices of cotton, oil-bearing crops, sugar and other farm and sideline products were also raised. The average price increase for all agricultural purchases was about 22%. Smaller price rises followed in subsequent years, and the proportion of state purchases at above-quota and negotiated prices also rose from negligible levels in 1977 to 60% in 1981 (Riskin, *China’s Political Economy*, pp. 285–86; Sicular, “Agricultural planning”).

55. “Communiqué of the Third Plenary Session of the Eleventh Central Committee of the Communist Party of China,” *Beijing Review*, No. 21 (29 December 1978), p. 52.

56. *ZGNJ* 1983, pp. 437–38.

57. Tang Tsou, Marc Blecher and Mitch Meisner, “The responsibility system in agriculture: its implementation in Xiyang and Dazhai,” *Modern China*, Vol. 8, No. 1 (January 1982), pp. 41–105; Andrew Watson, “Agriculture looks for shoes that fit: the production responsibility system and its implications,” *World Development*, Vol. 11, No. 8 (August 1983), pp. 705–730.

Nevertheless, changes in the rural economy during 1978–81 were uneven and, in many places, relatively mild in comparison with later years. The Hebei provincial leadership was hostile to the reforms introduced by the Third Plenum, and the pace of change was slow. While total agricultural output rose 17.9 per cent from 1978 to 1981 in the nation as a whole, it increased only a negligible 1.5 per cent in the province.⁵⁸

Cropping patterns too did not change in Hebei during the earliest years of the reform period. In 1979, the area sown to cotton contracted in both the nation as whole (by 7.2 per cent) and Hebei province (by 3.4 per cent) over the previous year. One reason was the lower relative profitability of cotton. While producer prices for all crops increased on average by 24.5 per cent, the purchase price for raw cotton increased only 15 per cent. Moreover, as noted above, cotton is a very labour-intensive and resource-intensive crop. In the following two years, though, a number of incentive programmes for cotton production were introduced: a 10 per cent increase in the procurement price, a 30 per cent price bonus for over-fulfilling quotas, and “incentive sales” (*jiang shou*) of two kilograms of grain for each kilogram of cotton delivered to the state in excess of average annual deliveries during the previous three years.⁵⁹ In the nation as a whole, the reactions of farmers to the price changes were remarkable: cotton sown area rebounded 9 per cent in 1980 and continued rising until it peaked in 1984 at almost seven million ha., 42 per cent higher than in 1978.

Yet despite these price incentives, in Hebei cotton area continued to decline to a post-1949 low in 1981, where it came to rest at 54 per cent of the 1952 level. There were several reasons for this. One was continuing state control of cropping enforced through the collectives and county governments by a provincial leadership wary of change. Collective farming remained firmly in place until the end of 1981.⁶⁰ Secondly, there still remained price and cost disincentives associated with cotton relative to other crops. Thirdly, in Hebei a new, high-yield variety of cotton – “Shandong No. 1” – was introduced, which doubled cotton output in 1980 purely on the basis of doubling land yields, thereby obviating any pressure for expanding sown area.⁶¹

Thus, the province did not revert to traditional cropping patterns emphasizing cotton until 1982. In that year, the Hebei province leadership was reshuffled and a group of reform-minded officials was appointed to replace those who had hindered the reforms.⁶² The first thing the new leadership promoted in the countryside was comprehensive household contracting (*da baogan*), which was spreading in other parts of China. The proportion of production teams in Hebei using comprehensive con-

58. *HBSC*, p. 39.

59. For a general discussion, see Sicular, “Agricultural planning,” p. 685 and *passim*.

60. Moreover, it took a rather “leftist” form. Private plots were cultivated collectively, and in the county government leadership and an economically advanced, urban-based agricultural commune, brigade-level accounting was even being defended.

61. In Hebei, cotton production jumped from 115,600 tons in 1979 to 247,200 tons in 1980. Cotton yields climbed from 210 to 450 kg./ha. (*HBNJ* 1988, pp. 450–53). Also see *NYNJ* 1981, p. 473.

62. *HBSC*, pp. 769–770.

tracting rose from 7 per cent in the middle of 1981 to 96 per cent by the end of 1982.⁶³ Cropping, then, is clearly affected not just by cropping policy or even just by agricultural planning more broadly, but also by ownership and organization.

In conjunction with this, the state virtually gave away its direct control over cropping. Instead of regulating producers' conduct, it was now more interested in outcomes. As long as yield increases permitted quotas to be met on less sown area, the state did not care much about the way land was allocated among various crops. The result was a dramatic improvement in production performance and a substantial change in cropping patterns. In Shulu, between 1981 and 1984 grain yields increased from 5.63 to 8.03 tons/ha., cotton from 423.8 to 1,035 kg./ha., and oil-bearing crops from 1.58 to 2.00 tons/ha. – an unprecedented accomplishment for a three-year period. Meanwhile the output of grain grew 26 per cent, cotton 156 per cent, and oil-bearing crops 23 per cent. Regulating outcomes seemed to have worked very well in Shulu.

This mode of regulation called for new policy instruments. Direct administrative intervention was replaced by various indirect economic measures, primarily price manipulation. It was assumed by policy-makers that, as rational actors, farmers would try to maximize their returns by adjusting their cropping patterns and their ways of allocating other key resources in accordance with the changing structure of relative prices. Shulu and Hebei farmers did not disappoint them. From 1981 to 1983 grain area declined 1.8 per cent in the nation as a whole, 9 per cent in Hebei, and 11.3 per cent in Shulu (also see Figures 1 and 5–7).⁶⁴ The declines in Hebei were steep mainly because of the province's comparative advantage in crops other than grain.

Yet Shulu's historical comparative advantage in cotton and the state's increase in prices for cotton procurement did not prompt Shulu farmers to rush back into cotton, as they might have been expected to do with their new-found latitude over cropping. In fact, Shulu's specialization in cotton actually *undercut* such a movement. In the Maoist period, Shulu's ratio of cotton to grain area had always been far higher than the provincial average.⁶⁵ Thus, the basic compulsory sales quota for cotton must have been much higher in Shulu than in many other places. Shulu farmers could therefore not benefit from selling marginal increases in cotton at the above-quota price as much as those areas with low or no cotton quotas at all.

Subsequent cyclical developments only further undercut the return to cotton in Shulu. Nationally and in Hebei, with the increased price of cotton, production reached new records for four consecutive years from 1981 to 1984, when it peaked both nation-wide and in Hebei (Figure 2).

63. *Hebei ribao* (*Hebei Daily News*), 16 May 1981; and *HBSC*, p. 255. Shulu moved completely to household contracting by 1983.

64. In China the drop was only 1.8%.

65. For example, in 1978 it was 54.3% in Shulu but only 11.3% in Hebei.

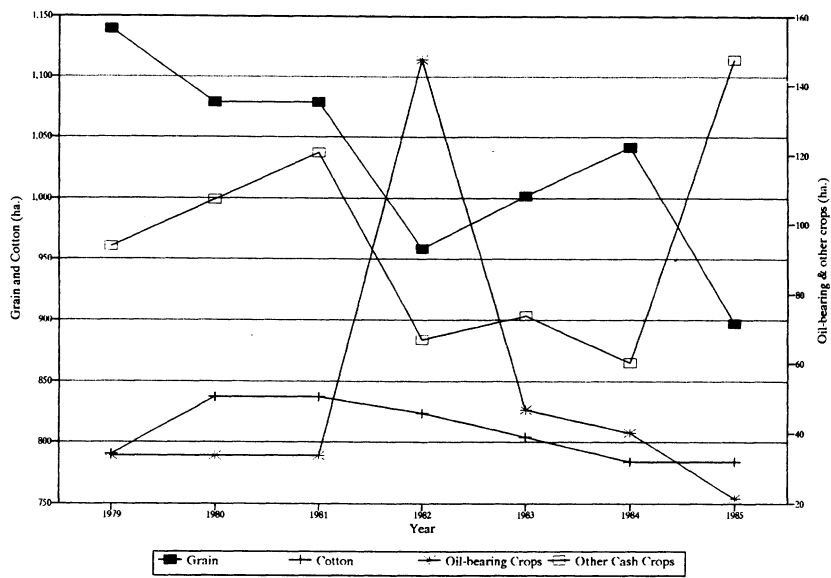


Figure 5: Cropping Patterns in Fanjiazhuang, 1979–85

In 1984 China became a net exporter of raw cotton.⁶⁶ The upsurge in production oversaturated the market. In 1984–85 the government adopted three counter-cyclical measures to discourage farmers from producing so much cotton. First, the price bonus for above-quota deliveries was eliminated and a single price was adopted. Secondly, a 50 per cent price subsidy for cotton producers in north China, instituted in 1979, was abolished. Thirdly, “incentive sales” of cheap grain for above-quota cotton deliveries was abolished.⁶⁷ Moreover, taking advantage of farmers’ difficulties in selling cotton to the state, procurement officials often forced prices down by arbitrarily undergrading what they were purchasing from farmers.⁶⁸ These measures gave farmers a disincentive to plant cotton. Nationally, cotton sown area dropped 25.7 per cent in 1985. Between 1984 and 1986, it declined 32.4 per cent in Hebei (Figure 1) and 14.8 per cent in Shulu county. (Shulu’s drop was milder than Hebei’s because it had converted proportionally less land during the “cotton boom” in Hebei province in the previous years. Thus it would suffer less from the elimination of benefits for above-quota deliveries.)

Thereafter cotton became less attractive than grain to farmers in Shulu

66. Kenneth R. Walker, “Trends in crop production 1978–1986,” *The China Quarterly* No. 116 (December 1988), p. 616.

67. Mei Fangquan, “Research note,” p. 22.

68. As a result, the quality of cotton purchased by the state in 1985 was, putatively, down 1.3 grades nation-wide and 1.65 grades in north China from the previous year (“Mianhua wenti diaocha,” (“Investigation into the cotton question”), *Renda baokan fuyin ziliao-nongye jingji* (People’s University Publication Reprints–Agricultural Economy, No. 6 (1987), p. 184).

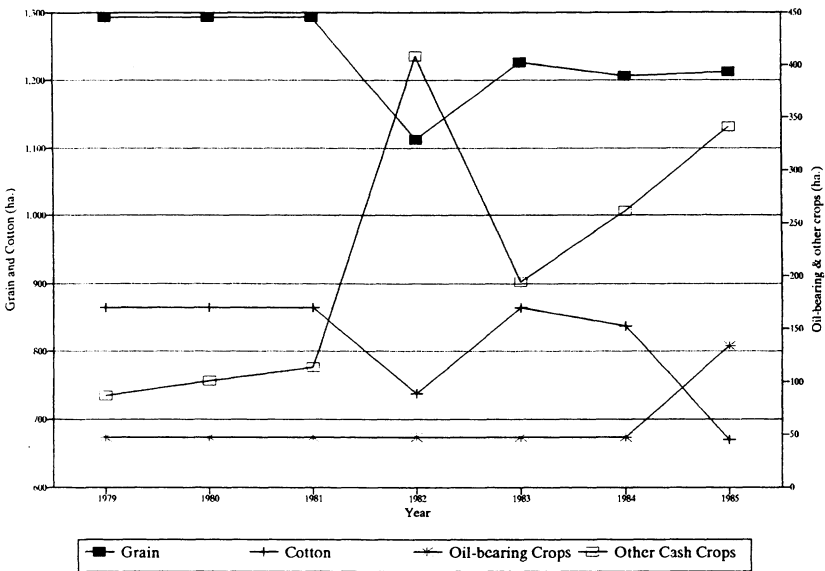


Figure 6: Cropping Patterns in Tianjiazhuang, 1979-85

and Hebei. First, prices remained unfavourable. In 1988, the purchase price of grain was 23.5 per cent higher than that of 1985, but the purchase price of cotton rose only 1.7 per cent (amounting to a decline in real terms). Meanwhile, costs of production in cotton remained very high.⁶⁹ “The costs of production of cotton rose much faster than grain. It requires much more chemical crop protection.”⁷⁰ Secondly, as noted above, cotton is a high risk crop, easily subject to damage from hail, rain, wind, insect infestations and plant disease. Thirdly, while farmers were allowed to sell extra grain at a much higher price on the free market after fulfilling their state quota, there was no free market for cotton. In 1985, when the government abolished the system of obligatory procurement, farmers were told that they could sell anything in excess of what had been contracted for, including both grain and cotton. But in 1987 the state changed its mind about cotton. Farmers now had to sell all of it to the state at official prices. They could no longer take advantage of a free market to make up for their losses from selling their output at low official prices. In 1989 and 1990, the government raised the procurement price of cotton from 220 to 280 *yuan*. Yet in 1990 in Shulu, “still the farmers are dissatisfied.”⁷¹ Thus, in 1989, for instance, Shulu cotton area was 78.7

69. In one Shulu village, they ran to 4 *yuan*/kg., as against a state purchase price of 5.6 *yuan*.

70. Interview with Zhao Yingmu, Vice-Director, Shulu Agriculture Bureau, 30 June 1990.

71. Interview with Party Secretary Ma Yue, Wangkou, Shulu, 4 July 1990. He was referring specifically to the various problems cited above. But in addition, part of the problem

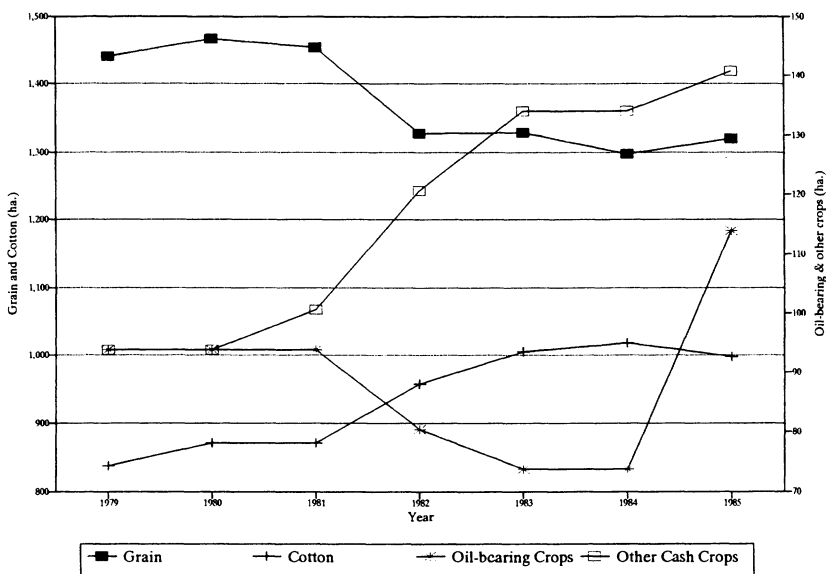


Figure 7: Cropping Patterns in Muqiu, 1979–85

per cent of that in 1984, and yield was only 67.2 per cent as high. Consequently, output was only 53 per cent of the 1984 level. Nationally, too, in 1990, China had its best harvest in cotton since 1984, but total output was only 71.6 per cent of that in 1984.

If the liberalization of cropping control did not draw Shulu farmers back into their comparative advantage in cotton, where did they go? The answer is that they sought out more profitable and less regulated crops and non-agricultural pursuits. These movements in turn also prompted counter-cyclical reactions by the state similar to that seen in cotton.

In 1982 there was a 44.3 per cent increase in area sown to oil-bearing crops in Shulu. National output had doubled between 1978 and 1982, while output of grain rose only 16 per cent.⁷² Thus, starting in late 1981, articles appeared regularly in the Chinese press discouraging planting them. But farmers had not retrenched as much as the government would have liked. To divert their interest in oil-bearing crops, in 1983 the

footnote continued

may have been the slow pace of increase of cotton procurement prices in Shulu compared with elsewhere in China. For this 60 *yuan* price increase, reported by Secretary Ma, is only 27%, which is well below the official state figures which report an increase in the procurement price of cotton in 1989 of 22.7% in 1989 and another 29.1% in 1990 (ZGNJ 1991, p. 254).

72. ZGNJ 1988, p. 248.

state eliminated the price bonus for above-quota deliveries.⁷³ This effectively lowered the overall price the state paid. Thus, the area sown to them in Shulu dropped 31.8 per cent.⁷⁴ Yet with the drop of effective procurement prices of cotton and grain in 1984 and 1985, oil-bearing crops' relative prices actually (if inadvertently) rose. As a result, in 1985 their sown area and output shot up in Hebei, which recorded a 44.8 per cent jump in output, and Shulu, where it shot up 140.8 per cent (Figures 1 and 2⁷⁵).

Even more spectacular changes in cropping occurred in other commercial crops, because of more favourable pricing and less state regulation. In Shulu vegetable and fruit production began to attract a great deal of attention. From 1980 to 1982, their purchase prices had gone up 49.3 per cent and 67.7 per cent respectively, much higher than the 16.7 per cent rise in oil-bearing crops. Their prices continued to rise in the later 1980s. High profits drove farmers to open new land and even to divert cultivated land to fruit orchards, although the official policy prohibited such diversion.⁷⁶ By 1987, fruit area and output in Shulu had doubled their 1984 levels. Fruit production became so popular that farmers demanded a wholesale redrawing of orchard contracts so that everyone could have a few trees. In the early 1980s Shulu's orchards had been contracted to households wishing to become fruit specialists (*zhuan ye hu*).⁷⁷ The redrawing of contracts actually contradicted the general reformist movement toward specialization at the grassroots level. Yet the Shulu Communist Party Rural Work Department obliged in this politically sensitive and administratively arduous task.

Another new trend in Hebei was to dig fish ponds out of cultivated land. Among all farm products, the price of aquatic products rose fastest, especially after 1986. It increased 36.3 per cent in 1987 and another 46.1 per cent in 1988.⁷⁸ Profits were so high that in many parts of Hebei with no history of raising fish, farmers started to construct and operate fish ponds.⁷⁹ Twenty-two of Shulu's 31 townships had ponds in 1990, and the county government's economic plan called for production of 120 tons of aquatic products in that year. But, of course, fishing can only flourish in

73. OECD, *Agriculture in China*, p. 29. In general the new oil-bearing crop price was a weighted average of 40% of the old quota price plus 60% of the old above-quota price (Sicular, "Agricultural planning," p. 693).

74. By contrast it dropped only 3.1% in Hebei as a whole. The difference had to do with Shulu farmers' above average aversion to cotton in these years. Another reason for the drop in Hebei and Shulu was a serious drought, which was especially devastating to oil-bearing crops.

75. Figures 5–7 also show that sown area of oil-bearing crops rose in two of the three sample communes. Nationally sown area of oil-bearing crops registered a 20.5% increase, and output a 32.5% increase.

76. *HBNJ* 1989, p. 96.

77. According to officials of the Shulu Communist Party Rural Work Department, this had occurred without significant popular opposition at the time, since fruit prices remained low and the market remained undeveloped (interview, Shulu county, 11 July 1990).

78. *HBNJ* 1989, p. 479.

79. *Ibid.* p. 96.

Shulu if more land and other resources pulled out of grain and cotton production.

Finally, in comparison with endeavours in other areas, agricultural production in general is less rewarding. It was the government itself that popularized the slogan “one cannot become rich without engaging in industrial production” (*wugong bufu*). Indeed, farmers found that they could get much larger and much faster rewards by reallocating resources from agriculture to industry, transport and commerce. In Shulu, from 1986 to 1989 the average annual growth rate of industrial income was 44 per cent, but agricultural income rose merely 9 per cent.

Grain: Still the “key link”? In light of all this, what happened to grain? As with oil-bearing crops and cotton in 1983 and 1984, so in 1985 the whole system of obligatory grain procurement and mandatory quotas was abolished. In theory, state purchase of grain was administered as follows. Commercial departments were to negotiate purchase contracts with farmers before the sowing season. The state, no longer guaranteeing the purchase of all grain, would only undertake to buy a specific amount, 30 per cent at low quota prices, 70 per cent at higher above-quota prices. Anything in excess of what had been contracted for could be sold on the free market, but with the proviso that if the market price fell below the quota price, the state would intervene and buy it at the quota price.⁸⁰ The state was motivated chiefly by a desire to reduce the sizeable subsidies it had been obliged to provide through its purchases of large quantities of grain at above-quota and negotiated prices, which were considerably higher than the urban retail prices at which it sold the grain. Successive bumper harvests in the previous five years, and particularly the peak grain harvest in 1984, seem to have convinced the government that the rural reform had created a buyers’ market, so that mandatory controls on grain cropping would no longer be necessary.⁸¹

In 1985, the Chinese government sought to achieve its policy goals in agriculture simply by adjusting relative prices. The problem was no longer insufficient supply of grain, cotton and oil-bearing crops. Rather, agriculture had achieved stable surplus production, and the government’s only problem was meeting its procurement contracts and storing and moving the bounteous harvests. The basis for this optimism, however, proved to be more illusory than real. The 1985 reform that derived from this optimism thus led to unexpected consequences.

The 1985 reforms set up a pricing structure that sent negative signals to grain producers in both buyers’ and sellers’ markets. In a buyers’ market, the price would fall to the point that farmers might have to sell

80. *NYNJ* 1985, pp. 1–3, 5–7; Sicular, “Agricultural planning,” p. 694.

81. In 1984 the Rural Development Research Group, a key government think tank, came to the conclusion that the supply of grain and cotton had greatly exceeded demand in China, and that this trend would continue unless the government adopted “effective measures to cut its procurement of grain and cotton.” Zhongguo nongcun fazhan wenti yanjiuxin (Chinese Rural Development Research Group), “Woguo liangshi gongjin de xianzhuang he biandong gushi” (“The state of our country’s grain supply and its changes”).

grain to the state at the old quota price, much lower than what they had received in the previous years. And in a sellers' market, the price would be higher than the newly-instituted procurement prices paid by the state, thus laying bare the tax implicit in the state price. Because the state purchase price is relatively stable, the amount of the implicit tax is a function of the market price. If grain came into short supply, the rising market price could dampen rather than boost farmers' initiative to produce more grain, because the tax burden would seem to them heavier than otherwise.⁸² To send a positive signal to producers, the government thus had to increase its purchase price. However, unless state retail sales prices were going to be increased accordingly, raising purchase prices would place a heavy burden on the already strained government budget.⁸³ Yet for political reasons, the government was reluctant to raise retail prices.

On the heels of the 1985 reform, farmers' disinclination to grow grain quickly became evident. That year, grain sown area in the nation as a whole fell by 3.58 per cent, and grain output fell by 28 million tons, the biggest drop in a single year since 1949. After 1985, in the nation as a whole grain area did not exceed the level of 1984 until 1990. But because of the population increase, domestic per capita grain supply was still lower than that of 1984, so much so that in 1990 Chinese leaders were very cautious in order not to overstate the achievement.

In Shulu grain production also stagnated in the latter half of the 1980s. Output and area in Shulu did actually expand in 1985. The county government's own concerns played an important role in this anomalous development. In March 1986, Shulu county was redesignated Xinji municipality.⁸⁴ It was expected that more people would be recategorized as "non-rural residents" (*fei nongye hukou*) and that as a result demands on state grain supply would rise. According to a provincial regulation, Shulu had to supply its own needs for grain while still fulfilling its procurement quotas.⁸⁵ But thereafter Shulu grain production moved erratically but indifferently, rising only 2 per cent from 1986 to 1989, on the basis of a 1.2 per cent drop in sown area and slowly rising yields (4.2 per

82. Economic Research Centre of the Ministry of Agriculture, "Liangshi duanque ji jingji zhengce de tiaozheng" ("Grain shortage and the readjustment of economic policy"), *Nongye jingji wenti* (*Problems of Agricultural Economics*), No. 5 (1988), pp. 6–7.

83. In 1978, government price subsidies were already 6 billion *yuan*, or 14.3% of its budgetary revenues. As early as 1986, however, the subsidies amounted to 70 billion *yuan* or 38.4% of the revenues. The price subsidies thus had become one of the most important sources of the rising deficit, a situation which has not abated. Lian Tianzheng, "Guanyu jinjin caizheng chizhi wenti de shizheng fenxi" ("An analysis of budgetary deficits in recent years"), *Caimao jingji* (*Financial Economics*), No. 5 (May 1987), p. 38; Ma Xiaohua, "Caizheng fenpei geju de xin bianhua yu shenghua gaige" ("Recent changes and enhanced reforms in financial distribution"), *Caijing yanjiu* (*Research in Financial Economics*), No. 5 (May 1988), p. 14.

84. See n. 4.

85. The redesignation would not change this rule. Hebei Provincial Government, "Guanyu shixing liangshi zhenggou xiaoshou diaobo baogan yiding sannian banfa de tongzhi" ("On implementing the method of a definite three-year plan to control grain procurement, purchasing, allocation and contracting"), 8 February 1982; in *HBSC*, pp. 201–203.

cent over the four years). The increase in productivity, however slow, had something to do with Shulu's designation as one of 169 "commercial grain production base counties" in 1986, which qualified it for preferential supplies and prices of grain inputs.⁸⁶

Nationally the slump in grain production alarmed top policy-makers.⁸⁷ Realizing that the solution they thought they had to the grain problem was illusory, the state began in 1986 to re-emphasize grain production, by raising purchase prices but also by increasing political pressure on farmers to meet their quotas. They began to question whether it was possible to regulate outcomes without directly regulating farmers' behaviour. In the Maoist period, by regulating conduct the state was able to achieve its main policy goal, though at high cost and with undesirable side-effects. And in the early years of economic reforms, regulating outcomes seems to have worked very well. In 1984, what bothered policy-makers was not insufficient supply of main agricultural products, but how to pay for, move and store the "surplus" of grain and cotton, where to find international markets for it, and how to persuade farmers to plant less of these crops. But before long, China had to import grain and cotton in large quantities again. In a stunning reversal, by 1990, *mandatory cropping quotas were back in place*.

Why has it been so difficult for the Chinese government to achieve its desired goals in the first decade of reform? Why did it return to the compulsory methods of the Maoist period?

Conclusion: The New Political Economy of Cropping

The rural reforms have significantly changed the state-farmer relationship in many ways. As the state has relaxed its grip on agriculture, the realm of farmers' choice has been greatly expanded. In relinquishing direct control over agriculture, the state hoped to influence cropping patterns primarily by manipulating relative crop prices. This has proved to be much more difficult than it expected. Even adjusting relative procurement prices of just grain, cotton and oil-bearing crops has been extremely complicated and contradictory. While prices on the market may rise and fall, the government, fearing rural discontent and unrest, does not have the option of lowering procurement prices. Thus, with each attempt to fine-tune the price structure, the government has ended up paying more. The growing budgetary burden in turn has hampered the capacity of the government to react to shifting supply and demand conditions. Yet, for fear of urban unrest, it also dared not raise retail prices of agricultural products without compensation to urban residents.

These problems of planning have been compounded by the fact that

86. In 1986, Shulu's Agriculture Bureau, the local arm of the Ministry of Agriculture, opened an Agricultural Technical Centre.

87. *Guanyu 1986 nian nongcun gongzuo bushu de jige zhongyao wenjian (Several Important Documents on the Deployment of Rural Work in 1986)* (Beijing: Renmin chubanshe, 1986).

they have been played out in the context of nascent and growing marketization. After 1985, for instance, market prices of grain, cotton and oil-bearing crops were often 20 to 50 per cent higher than those paid by the state. Higher market prices discouraged farmers from selling those crops to the state, but did not necessarily provide them with an incentive to produce more grain, cotton and oil-bearing crops. As has been seen, one reason is that the gap between state and market prices could demoralize farmers about these crops altogether. In other words, the dual-track price system may have a greater number of perverse effects than those that are usually cited (that is, that they discourage sales to the state and provide an incentive for sellers to divert to private markets products for which the state had contracted and provided low-cost inputs). Another factor undermining the intended incentive effect of higher state purchase prices is that prices of those agricultural products not regulated by the state – aquatic products, vegetables and fruit – have usually been even higher and increased much faster.⁸⁸ So, in making their decisions at the margin, Hebei and Shulu farmers have tended to move out of crops where there are quotas (even partial ones, supplemented by markets), and into those where there are none.

Moreover, for farmers, costs are as important as prices. In 1984, the state decided it was time to force up prices of industrial inputs to agriculture. The decision was based on the assumption that, having benefited a great deal from purchase price increases since 1978, farmers should have been able to absorb increasing costs of their inputs. Moreover, in the subsequent years the government's ability to monitor the magnitude of price increases of industrial inputs declined. As a result, the urban–rural price scissors widened: from 1982 to 1988, the cost of industrial inputs to agriculture in Hebei increased 230 per cent,⁸⁹ far faster than state procurement prices of any crops.⁹⁰ This of course required farmers to seek the highest possible profits, which in turn helped drive them out of grain, cotton, and oil-bearing crops and into fruit, vegetables and fish.⁹¹

In short, with greater autonomy, farmers have tended to make their cropping decisions with reference to the relative procurement prices of grain, cotton and oil-bearing crops, the relative price structure of all agricultural products on the free market, and the relative cost level of industrial inputs.⁹² Thus, in order to achieve its desired combination of agricultural products, the government has had to take into account

88. *HBNJ* 1989, pp. 95–96.

89. More specifically, from 1983 to 1986 charges in Hebei for electricity rose 100%, water 200%, and diesel fuel 300% (*Renmin ribao*, 3 October 1986).

90. *HBNJ* 1989, p. 96.

91. This may explain the puzzle, posed by Sicular, of why rising input prices were accompanied by increased cropping in input-intensive crops. Another answer may have to do with cotton's own input-intensity. Sicular, "Agricultural planning," pp. 697–98.

92. On top of all that, the relative profitability of agricultural production in contrast with non-agricultural endeavours may have affected their cropping decisions insofar as it prompted farmers to grow crops that required less intensive tending or whose tending could fit into a regime of non-agricultural employment.

hundreds of variables. Moreover, it has to have the capacity to alter those variables in favour of pursuing its objectives. This requires institutions, personnel and information capable of monitoring and regulating markets which have been lacking historically in China.⁹³ This formidable set of problems has proven insoluble so far.

Worried by poor production performance of grain and cotton, and lacking the tools to resolve the problem with the indirect levers it chose under the reforms, the central government has succumbed to the temptation to revert to mandatory interventions. Numerous reports reveal that the contract system has been far from voluntary except in 1985 when it was first instituted. In 1986, Tian Jiyun, Vice-Prime Minister in charge of agriculture, began to reinterpret the meaning of the 1985 reforms:

Since the grain contracts are tasks assigned by the state that must be fulfilled, we cannot treat them as ordinary economic contracts. We should not exaggerate reciprocity. These contracts are to be made whether one is willing or not....⁹⁴

That is, the delivery contract became an obligatory quota under a new name. As has been seen, in 1987, cotton growers' right to sell their products on the free market was terminated even after they had already fulfilled their delivery contracts. The next year, the State Council issued a "Resolution Concerning Grain Control and the Grain Market," which stipulated that grain markets should be closed in the months immediately after the autumn harvest. The purpose was to force farmers to sell above-quota grain to the state.⁹⁵

In 1990, when tough leadership was ascendant nationally, the government dropped the façade of voluntarism altogether by replacing the system of "delivery contracts" with fixed delivery quotas.⁹⁶ Until then, the only cotton quota in Shulu had been for output. But in 1990, the Shulu county government was receiving targets for cotton sown area as well as output targets from the provincial government. It divided these among its townships, which in turn imposed quotas on the households. The 1990 change was enforced strictly: officials of the Agriculture Bureau and the Cotton Trading Company – a special agency for procuring cotton – actually measured the land under cotton in the villages!

Chinese farmers could well have regarded as illegitimate the obligatory quota under the guise of contracts which prevailed between 1986 and 1989. If they were entitled to decide how much grain and/or cotton they would like to sell to the state in the form of a contract, what was the legal basis for government agencies to reimpose delivery quotas? How could the government go back on its word by reinterpreting the meaning of the

93. Cf. Japan, South Korea and Taiwan, which have in recent decades gained great experience in and institutions and information well-suited to close monitoring and regulation of the market. By contrast, from 1956 to 1978 the Chinese state tried to regulate its own private sector mainly by bludgeoning it.

94. *Renmin ribao*, 16 April and 26 November 1986.

95. *HBNJ* 1989, p. 64.

96. Interviews, Shulu county, July 1990.

1985 reform in a matter of one year? Farmers did not want to bear the liabilities of both the old and new systems while letting the state take advantage of its own way of combining the two. In the case of grain, market prices began to rise following the poor autumn harvest of 1985. On average, state procurement prices were 35 per cent lower than market prices.⁹⁷ Higher market prices made farmers' unwilling to fulfil existing grain procurement contracts or to sign new ones. Their reluctance often resulted in even more heavy-handed state interventions. To meet quotas imposed from above, desperate local cadres even went so far as forcing their way into farmers' houses and confiscating surplus grain. This had become so common in rural China that farmers invented a new term to describe it: *paliang* (confiscating grain by force).⁹⁸ It was against this background that the government adopted measures to limit farmers' access to the free market, hoping to foreclose the attraction of higher market prices. The formal reimposition of forced delivery quotas and even cotton sown area targets represented the state's latest attempt to counter farmers' resistance in the arena of cropping.

However, today it is not as easy as during the Maoist period to regulate farmers' conduct, because the realm of their choices has been considerably expanded over the last decade, and the state's institutional apparatus in the villages has been weakened. The state may impose sown area targets for certain crops, but farmers can follow the area plan while allocating labour and scarce inputs to other endeavours, such as more profitable cash crops, rural industry, vegetable and fruit production, fish raising and the like. This seems to have been Shulu farmers' strategy to beat the system. Cotton output in 1989 was only 47.5 per cent of the county's record set in 1983. While cotton sown area fell 22.4 per cent from 1983 to 1989, yield declined 38.9 per cent. This suggests that while cotton growers could not cut sown area as much as they wished, they could and did reduce other inputs to cotton, allowing this crop which the state made them plant to wither. Unless the state prepares to return to Maoist period practices such as "cutting capitalist tails" and re-establishing the organizational apparatus to enforce farmers' allocation of labour and inputs, which is unlikely both in policy and political terms (and which, the Maoist period shows, would also be ineffective in producing the desired productive activities), there seems no way for it to regulate farmers' conduct effectively.

State intervention is carried out by cadres at intermediate levels. But in Shulu it appears that they are increasingly acting in what they take to be the interests of the county and its government rather than those of the state Centre. For example, in 1990 some townships in the central region of Shulu (such as Junqi) were replacing cotton with chives, a favourite vegetable in north China which brought very high prices because it was in demand not only in local markets but also as far away as Beijing,

97. Sicular, "Agricultural planning," pp. 695–96.

98. Huo Da, "Minyishi weitian" ("Hunger breeds discontent"), *Zhongguo zuojia* (Chinese Writers), No. 4 (1989).

Tianjin and even Heilongjiang. To compensate for the loss of cotton area, in 1990 – the same year that mandatory cotton area targets were reimposed by the Centre – the county government reduced cotton area targets of chive-growing townships and imposed the differential on others in southern Shulu. County officials argued that the south possessed natural conditions more favourable to cotton anyway. But this does not fit with central Shulu's long history of growing cotton, the residue of skills this has left, the fact that cotton yields and profits there have been much higher than in the south,⁹⁹ and the vociferous complaints about cotton expressed by farmers in the south.

In permitting, if not encouraging, a high cotton yield area to abandon some of its cotton fields and forcing lower yield areas to make up the difference, the Shulu government could meet the letter of the Centre's new, mandatory cropping policy while also pursuing comparative advantage. The disadvantage was that under this cropping pattern, yields and output of cotton were undoubtedly lower than they would have been if more of the area under it remained in central Shulu. But under a state cotton monopsony and the attendant unfavourable structure of prices and costs, the county government did not have the same stake in cotton production as Beijing did. In short, the administrative flexibility the county government had at its disposal even at a time of very draconian central leadership permitted it to undercut the central state's objectives while fulfilling the letter of its policies.

Yet the county government was sowing not only the cotton but also the seeds of growing discontent among its southern farmers and grassroots cadres, who were grumbling openly about the pressure on them to grow so much troublesome and unprofitable cotton. It had proved itself far from immune to political pressure from dissatisfied farmers in the instance of fruit orchard contracts just a few years earlier. So, even in the "hardline" period after the Tiananmen crackdown, a new politics was developing involving the unhappy and vociferous farmers, their local leaders who were trying to be responsive to comparative advantage and the conflicting demands of the various farmers that it engendered, and a central state leadership that was increasingly frustrated by the ineffectiveness of economic incentives as regulatory levers.

Another Shulu case also points towards a politics in which the intermediate governments – in this case at the township level – were pursuing interests different from the central government's on cropping, even as they carried out directives from Beijing. In 1990, the county government increased cotton area quotas for many townships because of pressures from the Centre. Instead of displacing other crops, some townships decided to meet the higher quotas by intercropping cotton with wheat. In Shulu, cotton is usually planted in April and harvested in October. To intercrop it with wheat, it has to be harvested in late May or early June

99. In Jiucheng, which borders on Junqi, net income of cotton per ha. was 6,450 *yuan*, second only to that from vegetables. By contrast, in southernmost Wangkou, which was receiving new targets for cotton area, it was only 1,500 *yuan*.

and harvested before the wheat. The result was very low cotton yield and increased labour intensity for both crops. But farmers were happy, because net income was much higher on a unit of land with wheat and cotton intercropped than with wheat or cotton alone. And the county government was happy because it could report to the provincial government that it fulfilled its cotton area targets, and also because the intercropping increased the amount of grain available to meet the needs of the burgeoning urban market in Xinji, its rapidly growing capital. But Beijing's desire to increase cotton production was seriously undermined.

The conundrum of cropping under the reforms has opened up new and complex kinds of political conflict among central state institutions and leaders, intermediate ones, and the farmers. Even during the Maoist period, different levels of government had of course not always acted as one. But in the post-reform period the problem of disharmony within the state was exacerbated by several factors. First was the fiscal decentralization and related devolution of decision-making to local governments. "Revenue-sharing arrangements between the central and provincial governments and between provincial and county governments have transformed each level into a relatively independent economic agent seeking to maximize revenues."¹⁰⁰ In Shulu, a revenue contracting system adopted in 1986 gave the county government an incentive to maximize its budgetary income. Thus it had a strong stake in encouraging farmers to pursue comparative advantage, from which its finances could benefit in several ways. More diversified, well-stocked local markets were a source of increased tax revenues. The county government was also pursuing a goal of exporting specialized, high-quality crops such as chives and Tianjin pears, which would prove extremely lucrative for its own budgets as well as those of its farmers. By contrast, grain and cotton production not only did not contribute to county financial coffers, but could actually be seen as detracting from them by the opportunity costs they presented to specialized agriculture. Thus, a Chinese economist has pointed out: "In many places, the local governments are more reluctant than farmers to develop grain production, for it seems to them that in terms of expanding their revenue base, grain production is not cost-effective at all."¹⁰¹ The same would go for cotton.¹⁰²

Secondly, local governments' enlarged revenue base and expanded repository of political and economic instruments have provided greater latitude for them to manoeuvre. For example, the county government could persuade southern Wangkou to take on increased cotton acreage (to

100. Elizabeth J. Perry and Christine Wong (eds.), *The Political Economy of Reform in Post-Mao China* (Cambridge, Mass.: Harvard University Council on East Asian Studies, 1985), p. 14.

101. Ouyang Xuchu, "Bixu diaodong difang zhengfu fazhan liangshi shengchan de jijixing" ("It is necessary to mobilize the activism of local governments to develop grain production"), *Nongye jingji wenti* (*Problems of Agricultural Economics*), No. 6 (1988), p. 25.

102. Moreover, while a local government like Shulu's maintains an interest in a basic level of grain production in order to keep its population fed, it has no such interest in cotton.

make up for the cotton land used for Junqi's chives) because it was also offering Wangkou some very special opportunities in industrial development.¹⁰³

Thirdly, the county and township governments may have lost some of their capacity for and/or interest in closely regulating cropping. With reform, the Shulu county government and those of the townships began to emphasize industry and commerce in their development planning. Since there were so many other important activities in which they were engaged, these governments had much less incentive or wherewithal to intervene in cropping patterns unless they found it difficult to fulfil the minimum procurement quotas of certain important crops imposed from above.¹⁰⁴ Shulu officials knew quite well that farmers did not want to grow cotton. Thus, when cotton output was falling, but was still high enough to fulfil procurement quotas in the mid-1980s, the county government did not intervene even though the Centre was clamouring for increasing cotton production. Only when the central government became very tough on cotton by imposing *area* quotas in 1990 did the county government respond by issuing obligatory targets. Indeed, after cotton output dropped 41 per cent over 1988 and 1989, there was a real danger that the county might not be able to fulfil its procurement quotas. Imposing area targets was both an obedient gesture to Beijing, and the last resort to try to prevent cotton output from falling below the quotas which the Centre set for the county. But the county government had no intention of being over-zealous. It would not force local farmers to produce as much cotton as they had in 1983 and 1984. That is why it seemed to have held a loose rein on those townships which met higher cotton area quotas by inefficiently intercropping cotton with wheat.

Moreover, when the county government took decisive action on cropping, it often did so for reasons much more to do with its own local agenda than the interests and demands of Beijing. One example was its shift of the burden of planting more cotton to southern townships in order to enable central townships to become vegetable production bases. Another occurred in 1985, when it opposed national trends by increasing grain acreage in anticipation of rising local needs from its rapidly increasing programme of urbanization.

A government at the county level is not in a position to manipulate prices and taxes to influence cropping patterns. These are economic levers reserved primarily for the central and to a less extent provincial governments. A Shulu official grumbled about this by saying: "We should rely on economic measures. But we don't have any particular ones at hand."¹⁰⁵ Lacking economic instruments, county governments had to

103. For example, it had linked up Wangkou's premier industrial enterprise with the provincial Industry Bureau, which provided capital and vastly expanded markets. The county had also arranged to contract out the operation of a failing state enterprise under its administration to Wangkou. These are discussed in detail in Blecher and Shue, *Tethered Deer*.

104. They might also seek to do so if they were pursuing certain specific local goals such as expanding production of industrial products that required local agricultural inputs. We found no examples of such products in Shulu's industrial repertoire.

105. Interview, Shulu Water Conservancy Bureau, 20 June 1990.

try to guide cropping patterns either by using administrative controls or by selectively providing farm support. The latter includes agricultural research and extension, and provision of seed, fertilizer, agro-chemicals, diesel oil, irrigation, information, credit, machinery and repair services. Strong and well-co-ordinated farm support services could obviously result in substantial improvements in farm productivity. The inability of individual households to provide such services for themselves has reinforced the demand on the state for them, and thus enhanced the local government's ability to influence farmers' cropping choices by selectively supplying them.

For instance, by the late 1980s the shortage of chemical fertilizer had become many farmers' keenest concern throughout China. In 1987 there were over 10,000 incidents, involving several million desperate farmers, in which state warehouses were looted of chemical fertilizer. In the same year, the national government began to implement an incentive policy, announced in 1986, called "three linkages" (*san guagou*), in which the advance sale of high-grade chemical fertilizer was a reward granted to those farmers who signed contracts to deliver selected crops to the state. The "linkage" programmes were administered by local governments. Because the national government could not usually guarantee an adequate supply of chemical fertilizer, it asked local governments for supplements either through local production or imports from other localities. The local governments were thus in a good position to manage the "linkage" programmes in a way beneficial to themselves rather than to Beijing. In Shulu, the Communist Party Secretary and the Mayor¹⁰⁶ frankly admitted that the selective provision of farm supply services was a powerful weapon for implementing their plan. "To get farmers to go along with our cropping plans, we first rely on propaganda. Then we offer them low-priced seeds, fertilizer, and so forth, to make it in their own interest to go along with these plans."¹⁰⁷ The County Forestry Bureau, for instance, provided technical personnel assistance and material inputs to keypoint townships specializing in fruit production. In distributing fertilizer, pesticides and mechanical equipment, the bureau not only gave priority to those townships, but also charged concessionary prices. Likewise, the Water Conservancy Bureau could use differential prices of water, the Electric Power Management Bureau could adjust its priorities in distribution of electricity, the banks and credit co-operatives could give priority in loans for a particular kind of development, and so on. So local governments' control of backward linkages of agricultural production remains a potentially effective means of regulation.

Another problem is whether local governments are able to control their own agencies and functionaries. Recent years have witnessed increasing speculation, price manipulation, kickbacks and product adulteration by state administrative, commercial and industrial units taking advantage of their monopoly position and the shortage of farm inputs. If local

106. I.e., the head of the county government after it was reclassified as a municipality.

107. Interview with Party Secretary Bai Runzhang and Mayor Liu Baolu, 13 December 1986.

governments are unable to control their own staff, they will not only lose their control over cropping patterns, but also are likely to incur very strong resentment among farmers.

Possibilities for the Future

By lessening direct central state control over agriculture, the rural reforms in China have conferred more autonomy and initiative on provincial and county governments. They have also complicated the task of regulation. Now, the central plans, local governments' preferences and farmers' interests all affect cropping patterns. This has brought new problems. The increasing differentiation of interests and dispersion of decision-making power make it difficult for any single economic actor, whether central or local planner or individual farmer, to dominate others. In particular, the central government has been frustrated by imbalances between supply and demand, volatile market prices, growing state price subsidies of agricultural products, and above all the declining growth in farm production in the late 1980s. These difficulties have prompted renewed central state intervention in farm decisions. If the past is a good predictor of the future, efforts in this direction may be expected to continue at least spasmodically, even while they are very limited in their effectiveness.

Meanwhile the market will continue to play a role. With the vast political, structural and ideological changes that have taken place in the state since 1978, and with the memory, broadly shared among all actors, of the devastating consequences of exclusively relying on direct administrative intervention, the central government is unlikely to wish or be able to revert fully to the old methods. It has to be more sensitive to farmers' interests and more responsive in adjusting relative prices. This provides farmers with the opportunity to continue their efforts to exploit advantages of the old and new systems while trying to avoid being trapped by them.

In this situation, cropping patterns will continue to fluctuate, and the complex political struggle within the state, and between the state and the farmers, over allocation and reallocation of land and other scarce resources will go on. If Chinese history as well as comparative experience of political transformation in agrarian societies is any guide, this rural dynamic may prove just as destabilizing, and perhaps even more so, than the urban ones on which so many Western and Chinese eyes have been focused since 1989.