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### **Current Situations and Countermeasures of Rural Land Consolidation in Bengbu City**

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Abstract On the basis of performance and problems in land consolidation of Bengbu City, it is believed that land consolidation should focus on benefits of agriculture, farmers and countryside, strengthen consolidation of agricultural land and infrastructure construction.

Key words Bengbu City, Rural land consolidation, Integrated urban and rural land market

As the fundamental means of production for survival and development of human beings, land has nurture, carrying, production and ecological functions. With growth of population and socio-economic development, the demand for land resource becomes higher and higher. As China enters the rapid process of industrialization and urbanization, the situation is particularly worse. China has scarce land and prominent human-land conflict. Especially, in rural areas, the waste is serious, for example, homestead occupies much land. Therefore, the study of rural land consolidation is of realistic significance.

### 1 Overview of study area

1.1 Geographical location Bengbu ( $32^{\circ}43'N \sim 33^{\circ}30'N$ ,  $116^{\circ}45'E \sim 118^{\circ}04E$ ) is situated in Huai River basin and northern part of Anhui Province. It borders on Suixi County, Suzhou City, Lingbi County and Si County in the north, contiguous to Huainan City and Fengyang County in the south, adjoins to Mingguang City and Sihong County (in Jiangsu Province) in the east, and adjacent to Mengcheng County and Fengtai County in the west. It includes Longzihu District, Bengshan District, Yuhui District, Huaishang District, Huaiyuan County, Wuhe County and Guzhen County.

1.2 Natural conditions Bengbu City crosses Qinling Mountain – Huai River boundary between the climatic regimes of northern and southern China, and belongs to transition area of Huang – Huai – Hai Plain (North China Plain) and Yangtze – Huai River hilly areas. In Bengbu City, soil types mainly include fluvo-aquic soil, yellow cinnamon soil, lime concretion black soil and rice soil. Situated in transition area of subtropical monsoon climate and temperate monsoon climate, Bengbu City is rich in rainfall and there is a clear distinction between four seasons. The average temperature of the whole year is 15.6℃ and the average precipitation is 801.3 mm.

1.3 Social and economic conditions Connecting north and

south, east and west of China, Bengbu City has outstanding traffic and location advantage, and Beijing - Shanghai Railway crosses Bengbu City, making it an important industrial city of Anhui Province. In 2012, Bengbu City's GDP reached 89 million yuan, increased about 13% compared with the same period in the previous year, with the growth rate ranking the first in Anhui Province. The growth of primary, secondary and tertiary industry is 5.5%, 16.5% and 11.5% respectively. Financial revenue reaches 16.47 billion yuan, increased about 21.1%, and local financial revenue gets to 7.84 billion yuan, having increase of 27.8%. The disposable income of urban residents per capita reaches 20 685 yuan, with growth rate up to 14%. Per capita net income of farmers increases about 18%, up to 7 810 yuan. Comprehensive energy consumption and major pollutant emission are constantly reducing. The urbanization rate rises to 48.3%, 1.7 percentage points higher than the previous year.

### 2 Current situations of rural land use

**2.1** Land use structure (Table 1) Bengbu City has 595 072. 23 hm² total land, including 376 265.93 hm² cultivated land (accounting for 63.22%), 2 465.61 hm² garden area (accounting for 0.41%), 18 146.06 hm² forest land (accounting for 3.05%), 187.63 hm² grass land (accounting for 0.03%), 55 563.18 hm² other agricultural land (accounting for 9.34%), and 58 659.73 hm² rural residential area (accounting for 9.86%) $^{[2]}$ .

Table 1 Rural land use structure of Bengbu City in 2012

| Land type                           | $\rm Area/\!/hm^2$ | Percentage<br>into the whole<br>area//% |
|-------------------------------------|--------------------|---|
| Cultivated land                     | 376 265.93         | 63.22                                   |
| Garden area                         | 2 465.61           | 0.41                                    |
| Forest land                         | 18 146.06          | 3.05                                    |
| Grazing land                        | 187.63             | 0.03                                    |
| Other land                          | 55 563.18          | 9.34                                    |
| Rural residential area              | 58 659.73          | 9.86                                    |
| Land for water conservancy projects | 47 153.30          | 7.92                                    |
| Unused land                         | 57 625.66          | 9.68                                    |

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- **2.2** Characteristics of land use (1) High proportion of agricultural land and large per capita cultivated land. Situated in the big northern Anhui Plain area, Bengbu City has large per capita cultivated land, up to 1 046.7 m², which is higher than the average level of Anhui Province (880 m²) and that of the whole country (913.379 m²). (2) Large rural residential area and high potential of urban and rural integration. In 2010, the rural residential area of Bengbu City was 58 659.73 hm², the per capita area up to 327 m², much higher than the per capita rural residential area of the whole country 150.00 m².
- **Problems of land use** (1) Prominent human-land conflict. This is mainly characterized by two aspects. One is little per capita land area, only 0.15 hm<sup>2</sup>. The other is constant growth of population and gradual decrease of cultivated land. Thus, land resource has become a major bottleneck restricting social and economic development. (2) Prominent conflict between land supply and demand. According to prediction, by 2020, the total demand for construction land in Bengbu City will be 44 759. 92 hm<sup>2</sup>. However, the area available is only 29 756.72 hm<sup>2</sup>, with the gap up to 15 003.20 hm<sup>2</sup>. (3) Serious land pollution. For the time being, it is difficult to stop agricultural area-source pollution and three industrial wastes, because application of chemical fertilizer is high, up to 1.7 times the upper limit of world application of chemical fertilizer, and the practical technologies are not proper, the utilization ratio is less than 30%. Consequently, there is serious problem of pollution of surface water and ground water. (4) Reduction of cultivated land quality. Among the cultivated land occupied for construction in Bengbu City, much is farmland with high quality, much input and excellent facilities around towns and along traffic trunk lines. However, the supplementary cultivated land mainly comes from waste land development, reclamation of mud flat and consolidation of villages, so the overall quality of cultivated land is dropping.

### 3 Analysis on current situations of rural land consolidation

- **3.1** Achievements in land consolidation In the period of the Eleventh Five-Year Plan, Bengbu City takes land consolidation as fundamental guideline of protecting cultivated land, promoting intensive use of land, and speeding up ecological progress, to actively push forward various land consolidation projects. It has made significant achievements in land consolidation.
- **3.3.1** Supplementing cultivated land. In 2006-2010, Bengbu City increased cultivated land for  $3\,324.45\,\,\mathrm{hm^2}$  through land consolidation, development and reclamation. In the same period, it applied and obtained the approval of 17 provincial and state invested land consolidation projects, with total scale up to  $31\,172.99\,\,\mathrm{hm^2}$ , new cultivated land up to  $1\,011.19\,\,\mathrm{hm^2}$ , and the total investment amount up to  $730.277\,\,\mathrm{million}$  yuan. Through various engineering measures, it improves soil structure and quality of cultivated land. Besides, it improves agricultural production conditions and overall output of cultivated land through farmland capital con-

struction.

- 3.3.2 Promoting integrated development of urban and rural areas. Through establishing contact between increase and decrease in urban and rural construction land, balancing land requisition and compensation, point-to-point change and prior reclamation, Bengbu City further protects cultivated land, promotes consolidation of rural construction land, especially rural homestead, to properly allocate rural land resource, optimize urban and rural land use structure, and accelerate integrated development of urban and rural areas. Since 2006, through projects of establishing contact between increase and decrease in urban and rural construction land, Bengbu City dismantled and reclaimed 8 334 hm<sup>2</sup> land, including 5 973 hm<sup>2</sup> for returning to cultivated land; it approved 59 point-topoint change projects, with the amount of turnover up to 1391.9 hm<sup>2</sup>; it approved 25 prior reclamation projects, with the amount of turnover up to 811.3 hm<sup>2</sup>[3].
- **3.3.3** Improving farmland ecological environment. Through setting up farmland protective forest network, it increases rate of forest and wood coverage, and improves farmland ecological environment. Besides, Bengbu City takes measures to encourage farmers to live close to towns and implement large-scale operation, which reduces domestic sewage and rubbish, and lowers the degree of agricultural pollution.

#### 3.2 Problems in land consolidation

- 3.2.1 Imperfect investment and financing system and simple land consolidation financing channel. Major land consolidation projects already implemented show that consolidation funds mainly rely on government input, land consolidation operating mechanism is relatively simple and fails to bring into play subject status of farmers and rural collectives, and fails to introduce participation of social funds.
- **3.2.2** Improper allocation of land revenue and low enthusiasm of farmers. Due to lack of clear rural land property right relationship, land revenue of rural construction land consolidation is not fair. Then, farmers' benefits are damaged. In this situation, some farmers do not support, or even resist the land consolidation.
- **3.2.3** Increasing difficulty in consolidation of construction land. On the step-by-step and easy first and difficult later principles, rural land construction land is mainly concentrated on waste industrial mines, discarded homestead and some rural residential areas whose relocation cost is low. With advance in consolidation of construction land, the relocation is more and more difficult and cost is higher and higher, so the consolidation difficulty is also getting higher and higher.

# 4 Thinking on rural land consolidation practice in Bengbu City

**4.1** Land consolidation should return benefits to agriculture, countryside and farmers The central point of rural land consolidation should lie in farmers' benefits. Therefore, it is required to conduct rural land ownership confirmation and certificate issue, make clear land ownership, including collective land ownership.

ership, rural land contractual right, homestead ownership and house ownership, etc. The incremental income from land consolidation should be properly allocated in accordance with definite land property right. For agricultural land, especially after consolidation of cultivated land, the boundary of contractual land has already broken, but farmers still can handle paid circulation by their rural land contractual right certificate, such as buying shares, mortgage, letting or transfer. For homestead, farmers also can share its incremental income by their homestead ownership certificate. Naturally, rural collectives also can withhold the respective land incremental income, but this amount should be used in developing rural public welfare to realize the objective of operating rural areas with rural land. Only through this, can it summon up farmers' enthusiasm for participation in land consolidation and changing the negative factors into positive ones.

### 4.2 Establishing urban and rural integrated land market

In the process of urbanization and industrialization, part of cultivated land will be occupied. However, the occupied cultivated land must obtain index of construction land. At the same time, it should make proper supplementation through land consolidation. Rural residential area is a huge sum of idle assets. With advance of urbanization, more than 42 000 hm² area of homestead in Bengbu City can be withdrawn. The withdrawn homestead should be firstly used for land reclamation, then for construction of beautiful countryside, finally for urban construction. If urban development needs such land, it can obtain through transfer process at collective land market. Therefore, it is urgent to advance comprehensive reform of rural land system and accelerate building urban and rural integrated land market, to show and realize value of rural homestead assets.

## **4.3 Strengthening rural land consolidation and infrastructure construction** The 18th National Congress of the CPC calls

for promoting integration of IT application and industrialization, interaction between industrialization and urbanization, and coordination between urbanization and agricultural modernization, thus promoting harmonized development of industrialization, IT application, urbanization and agricultural modernization. Among these, the work of agricultural modernization is most arduous and critical. Without agricultural modernization, there will be no Chinese modernization, and building of a moderately prosperous society in all aspects will be empty talk. Reduction of quality of cultivated land is resulted from "occupying good land but compensating bad land" in the process of urbanization. In view of this problem, government at all levels should get rid of the old approach and improve quality of existing cultivated land through land consolidation. Incremental income of land should be mainly used for rural land consolidation and infrastructure construction. In addition, government should practically implement the guideline of "encouraging industry to support agriculture in return for agriculture's earlier contribution to its development and encouraging cities to support rural areas", so as to halt the trend of decline in quality of cultivated land.

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land circulation, so as to effectively solve the problem of obstruction in land circulation. (2) It is recommended to establish and improve rural land circulation information network system, to make supplying and requisitioning parties obtain land circulation information timely and accurately, increase transaction success rate, and reduce transactional costs. (3) It is required to establish land circulation price system oriented towards market, to gradually form market price competition mechanism of land circulation, so as to accurately reflect dynamic price change of land, and promote proper allocation of land resource. (4) It should strengthen guidance and supervision of government department on land circulation market, to regulate land circulation market. Finally, it is proposed to gradually improve supporting measures of rural land circulation, to create favorable external environment for rural land circulation. This can achieve the objective of preventing and controlling land circulation disputes and promoting new socialist countryside construction.

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