Strategies for Cultivating New Peasants Based on Modern Agricultural Development

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Abstract Development of modern agriculture has higher and higher requirements on quality of peasants. This study, on the basis of connotations of modern agriculture, current situation and problems of Chinese peasants, and contradictions between modern agricultural development and peasants' quality, specifies requirements of modern agriculture on new peasants, proposes corresponding suggestions to promote the cultivation of new Chinese peasants.

Key words Modern agriculture, New peasants, Cultivation, Countermeasure

It is clearly stated in Central Document No. 1 (2007) that development of modern agriculture is the primary task of the construction of new socialist countryside. In *Suggestions of State Council on Modern Agricultural Development for Promoting the Construction of New Socialist Countryside Effectively*, it is specified that modern agriculture depends on cultured new peasants who master necessary techniques and management science. The documents show that new peasant is an inevitable precondition for the development of modern agriculture. On the one hand, development of modern agriculture requires for the improvement of land output rate, resource utilization rate, labor productivity, comprehensive agricultural productivity and competitiveness of agricultural products. It serves peasants and also depends on peasants, and has higher requirements on peasant quality. On the other hand, status quo of rural labors in China fails to meet the requirement of modern agriculture on peasant, and there are contradictions between peasant quality and requirement of modern agriculture. Therefore, it is imperative to cultivate new peasants for meeting the requirements of modern agricultural development.

From the perspective of agricultural development history, there are three stages: primitive agriculture, traditional agriculture and modern agriculture. Development of modern agriculture is a process of realizing agricultural modernization, it includes two aspects: (a) modernization of material conditions and technologies in agricultural production, application of modern science and technology and machinery to realize mechanization, technicalization, intensification and sustainability of agricultural production; (b) modernization of agricultural organization and management, application of production - processing - marketing integration and rural cooperative economic organization to improve organization degree of agricultural production, realize specialization and enterprization of agricultural production, and intensification of production and operation.

In *Suggestions of State Council on Modern Agricultural Development for Promoting the Construction of New Socialist Countryside Effectively*, development of modern agriculture equips agriculture with modern material conditions, reforms agriculture with modern science and technology, regulates agriculture with modern industrial system, promotes agriculture with modern new peasants, and aims at improving agricultural water conservancy, mechanization and informatization level, land output rate, resource utilization rate, agricultural labor productivity, as well as quality, benefits and competitiveness of agriculture.

1 Status quo of Chinese peasants

Modern agriculture depends on peasants for further development, thus it has higher requirements on the quality of peasant. However, current Chinese peasants show poor competitiveness because of low cultural quality, scientific quality, and management competence.

1.1 Low cultural quality Among rural labors, proportion of illiterate peasants or primary school graduates is declining as Table 1 shows. Proportion of primary school graduates declines from 32.22% in 2000 to 25.30% in 2008, proportion of middle school graduates, polytechnic school graduates, junior school graduates and above increases, and their ratio to the total labor increases from 9.31% in 2000 to 11.4% in 2008. But education level of rural areas still lags behind that in urban areas. Moreover, cultural background of rural labors in different regions is extremely uneven, for example, illiterate and semiliterate ratio to total rural labors is 10.2% in east China, 12.5% in central China, and 21.6% in west China. In as early as 1994, college graduates accounted for 36.1% of all American farmers, high school graduates 44.1%, and among farm workers above 25 years old, college graduates accounted for 43.7%, and high school graduates 41.7%. The above statistics show the poor education background, cultural, scientific and technological quality of rural labor forces in Chi-

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na, and the poor quality restricts peasants' capacity of accepting new knowledge and information, their level of thinking and also rural economic and social development. In addition, it inhibits improvement of agricultural labor productivity, so it is not favorable for the healthy and effective development of modern agriculture.

Table 1 Cultural background of rural labor forces

Ratio to the total labor forces//%	1990	1995	2000	2007	2008
Illiterate or semiliterate	20.73	13.47	8.09	6.34	6.15
Primary school graduate	38.86	36.62	32.22	25.76	25.30
Middle school graduate	32.84	40.10	48.07	52.91	52.81
High school graduate	6.96	8.61	9.31	11.01	11.40
Polytechnic school graduate	0.51	0.96	1.83	2.54	2.66
Junior college graduate and above	0.10	0.24	0.48	1.45	1.68

Note: The above data is taken from Statistical Yearbook of Chinese Rural Areas (2009).

1.2 Poor scientific and technological quality Influenced by poor cultural quality, most rural labor forces in China show poor capacity of accepting agricultural technologies, they take a wait-and-see attitude toward new agricultural technologies and products, and are not able to apply agricultural science and technology in production practices. The statistics show that there are more than 200 million rural labors below 35 years old, but less than 9.1% of them received professional skill training, and less than 5% of them received agricultural vocational training. Proportion of rural labors enrolled in technical training schools is low and the quantity keeps declining in recent years (Table 2). In addition, from the perspective of scientific and technological quality of rural labor forces, only 20% of them received professional skill training, 3.4% and 0.13% of them received primary vocational and technical training and secondary vocational and technical training or above, 76.4% of them received no skill training.

From the perspective of agricultural technical trainer, specialized staffs for agricultural technical training and promotion are badly wanted, more than 2.47 million senior and junior agricultural and forestry technicians have been cultivated since the foundation of the People's Republic of China, but only 0.76 million of them are staying in rural areas. In every 10,000 agricultural population in China, there are only 6.6 agricultural technicians, 1.2 college graduates of agricultural majors, the number achieves only 0.58% of that in the US; only 1 agricultural technician for every 4 667 hm^2 arable land, 1 veterinarian for every 7 000 livestock, 1 animal husbandry staff for every 15.3 ha. grassland, 70% of agricultural technologies cannot be widely applied. Scientific and technological quality of peasants is closely related to income level of peasants, modern agriculture depends on science and technology and also needs peasants with high scientific and technological quality, thus it is significant for the development of modern agriculture to improve scientific and technological quality of peasants.

Table 2 Technical training situation of peasants

Technical training schools for peasants	1995	2000	2006	2007	2008
Number of school	385 000	486 000	151 000	153 000	138 000
Number of graduate	70 354 000	90 471 000	45 206 000	46 703 000	43 582 000
Number of admissions	54 373 000	77 447 000			
Number of school students	49 487 000	62 096 000	38 424 000	37 873 000	36 948 000
Number of teachers	136 000	146 000	103 000	103 000	101 000

Note: The above data is taken from Statistical Yearbook of Chinese Rural Areas (2009).

1.3 Poor operation and management quality Small-scale scattered rural household production in China belongs to fragmented operation, there are more than 900 million population in rural China owning land use right, and more than 250 million small-scale household operations. Arable land per family is only 0.5 ha., even average arable land area of major grain producing area is 0.6 ha., so peasants show poor strength in the whole market of means of agricultural production and market of agricultural products. In addition, long-term production mode of natural economy and traditional planned economy contribute to the poor market consciousness of peasants, they are not familiar with operation laws of market economy and incapable of grasping market information, so they are not able to adjust and organize production according to market changes, and in most cases, they follow suit and it may cause blind production.

According to investigation of rural households in 3 villages of the major grain producing area, 78% of rural households chose "for satisfying their own food demand", 25% chose "providing job opportunities for their own labor forces". In terms of grain production decisions, 48.2% were determined by grain production price, 34.5% by peasants' habits, 6.4% by simulating others, 1.6% by government requirements. In the product marketing, market information for rural households in the 3 villages accounted for 52%, 42% and 71.2% of the total, respectively[1]. Such a result shows poor commercial and market awareness of peasants, and low level of agricultural industrialization. In addition, most peasants have received systematic education and training in operation and management, thus they fail to meet the needs of market economy, and their poor competitiveness cannot adapt to development needs of modern agriculture. Limited by production mode of small-peasant economy and lack of scientific operation and management concepts, standardization management cost of grain production is too high, but the standardization level is low, so export of Chinese agricultural products is always frustrated by many problems in quality and food safety standards, and the products are not competitive in the international market.

2 Requirements of modern Chinese agriculture on quality of peasants

Objectives of modern agriculture are "equips agriculture with modern material conditions, reforms agriculture with modern science and technology, regulates agriculture with modern industrial system, promotes agriculture with modern new peasants, and aims at improving agricultural water conservancy, mechanization and informatization level, land output rate, resource utilization rate, agricultural labor productivity, as well as quality, benefits and competitiveness of agriculture". Development of modern Chinese agriculture requires new peasants with "adequate knowledge, technologies and operation skills".

2.1 High cultural quality Most Chinese peasants have poor cultural quality, but cultural quality is a major force promoting the development of social productivity, and investigation statistics show that cultural quality of peasants greatly influences agricultural production. According to domestic and overseas researches, primary school graduates, middle school graduates and college graduates can improve labor productivity in agricultural production by 43%, 108% and 300%, which clearly shows the significance of cultural quality in improving skills and production efficiency of labors, and promoting the development of social productivity. Overall cultural quality of peasants determines peasants' capacity of accepting new technologies, new concepts and new information, as well as new varieties, environmental protection, food safety and standardization knowledge. Modernization and industrialization of agriculture depends on peasants, and has higher requirements on cultural quality of peasants. Therefore, cultural quality of peasants is an inevitable factor in the modernization of agriculture, because promotion and application of new technologies and concepts, implementation of modern operation and management science requires the improvement of peasants' cultural quality.

2.2 High scientific and technological quality In the development of modern agriculture, modern science and technology and equipment are applied to reform traditional agriculture, so in essence, it is a process of applying advanced science and technology in agriculture. Modern agriculture is a technology-intensive industry, the advanced science and technology and equipment are key factors for the development of modern agriculture. Agricultural modernization includes modernization of agricultural production mode, modernization of agricultural production technology, and modernization of agricultural production and management. Agricultural modernization can only be realized by peasants, so traditional peasants should be transformed to modern peasants, and new peasants with high scientific and technological quality and modern production skills have to be cultivated. Scientific and technological consciousness, production skills, operation and management level of peasants directly determines whether agricultural modernization can be realized or not. Peasants with high scientific and technological quality have enthusiasm for learning new agricultural technologies, and they accept new research fruits and technologies easily, so the benefits of new research fruits and technologies can be fully realized.

2.3 High operation and management quality Modern agriculture is an open market-oriented industry producing agricultural products, it will not develop healthily in a closed environment, thus it is imperative to cultivate peasants with modern market consciousness, operation and management capacity suiting development of modern economy. Only if peasants' capacity of operating and managing modern agriculture is improved constantly, and modern concepts are applied, agricultural production will be pushed to the intensive, specialized, mechanized and technological road, and the goal of becoming rich will be finally realized.

On the basis of mastering knowledge about modern information, marketing and related skills, organizing production with market needs as the direction, establishing rural operation and management teams, and cultivating high-quality talents, peasants will be able to avoid market risks as much as possible, their bargaining power and competitiveness will be improved, they will obtain their own positions in the ferocious market competition, and rural productivity will be transformed to development of rural economy. Moreover, rural entrepreneurs are foregoers in constructing modern agriculture and promoting agricultural industrialization, and they are also significant talents for the development of rural economy. In leading enterprises and specialized cooperatives, discovering and cultivating talents with high professional competence and modern operation concepts, establishing rural entrepreneur teams contribute greatly to the agricultural modernization.

3 Policies and suggestions for cultivating new peasants

On the basis of analyzing connotations of modern agriculture, current quality of Chinese peasants, and requirements of modern agriculture on new peasants, corresponding policies and suggestions were given to cultivate new peasants with "adequate knowledge, technologies and operation skills" adaptive to the development of modern agriculture in China.

3.1 Establishing new peasant education and training system, cultivating new peasants with competent knowledge

3.1.1 Developing rural basic education, providing peasants opportunities of receiving higher education. Rural basic education should be further enhanced to improve overall cultural quality of peasants. *Compulsory Education Law* should be implemented effectively to popularize nine-year compulsory education, which is a fundamental way of improving cultural quality of peasants and eliminating illiteracy. Rural education deserves the prior position in education development to cultivate new peasants. In March 2005, Premier Wen Jiabao stated in *Government Work Report* that education should be placed on the prior position of development, especially rural compulsory education should be promoted; the fund guarantee mechanism dominated by government input should be improved; the plan to make nine-year compulsory education universal and to eliminate illiteracy among the young and middle-aged in the western regions should be further implemented; this policy

should be implemented all over the country by 2007, so all children from poor families will go to schools and receive compulsory education.

Primary and middle schools in rural areas are frontiers for peasants learning science and technology and realizing occupation transformation. Therefore, existing rural education resources have to be integrated, conditions of rural primary and middle schools should be improved, the team of rural teachers should be stabilized and their enthusiasm should be activated by adopting encouragement measures. Furthermore, more efforts should be given to balance the development of rural and urban education, improve education quality of rural primary and middle schools, so as to provide a relatively fair education environment for rural kids, and cultivate new peasants for the construction of new countryside.

3.1.2 Reforming rural education system and contents. In the traditional education system, rural education refers to only the nine – year compulsory education, but the fact is it has richer connotations and more important responsibilities, for example, cultivating high – quality students for cities and talents for the construction of rural areas and development of rural economy. Although many middle and high school graduates go back to rural areas and work there, but compulsory education includes no content for serving agriculture or rural areas. In view of this, rural education contents have to be changed to meet needs of rural areas, pertinence and practicability of rural education should be enhanced to serve "agriculture, rural areas and peasants", enable peasants to meet needs of agricultural modernization, new courses should be arranged to meet needs of quality education, teaching evaluation, examination and enrollment system should be improved, innovation spirits and practical ability of students should be cultivated.

"Pioneering education" can be adopted as an important part of modern concepts for rural pupils and middle school students, so the graduates will have pioneering spirits and basic concepts of starting their own undertakings. "Green certificate" should be popularized in rural middle schools to promote "3 + 1" or "3 + X" education based on courses of nine – year compulsory education. That is, "green certificate" trainings can be organized for one year (or several months) when students finish their three – year middle school education, specialized funds should be devoted to ensure "free" training of students in poverty-stricken regions or other pre – job trainings. These trainings will help graduates master agricultural knowledge and adapt to actual needs of agricultural production and rural economy. In addition to reforming rural education system, humanistic education and aesthetic education should also be promoted to cultivate peasants' humanistic and innovative spirits, improve their aesthetic quality, and cultivate new peasants of high cultural quality.

3.2 Organizing technical training and adult education, cultivating new peasants

3.2.1 Devoting more in rural vocational education and training. More efforts should be devoted in enhancing the construction of specialized peasant training teams to cultivate new peasants and improve the rural education and training. In view of this, the construction of various education and training agencies should be enhanced, such as agricultural technology promotion department, agricultural radio and TV schools, agricultural vocational schools, rural technical schools and rural adult cultural schools, and effective measures should be taken to attract teachers and technicians. In addition, relative stable teams of supernumeraries are also necessary, for example, researchers, teachers and technicians from scientific research institutes, colleges and universities, agricultural enterprises, specialized associations and technology promotion departments can be invited to teach and train peasants.

Moreover, management systems should be regulated, multi-level peasant training organizations established, and the peasant training organization system improved. From the longitudinal perspective, a three-level training organization system (county, town and village) can be established, education and training agencies should be integrated and used effectively to form a batch of training bases with competent teachers and complete functions. By attracting experts and volunteers from colleges and universities, scientific research institutes, enterprises, peasant cooperatives and social groups to join peasant education and training, multi-layered, multi – directional and multi-objective education and training needs of peasants will be satisfied. From the transverse perspective, specialized technical trainings can be organized in a flexible way according to needs of farming seasons, so peasants will apply what they learn in production immediately. By training peasants who receive no formal education, and further promoting the demonstration effect, introducing trainees to enterprises, connecting scientific research fruits and production, scientific and technological and cultural quality of peasants will be improved greatly.

3.2.2 Encouraging rural adult education. Rural adult education is a significant part of continuing education of peasants, it covers adults working in rural areas, and targets at training secondary and senior specialized talents for rural economy. In addition, as a part of rural education, it has to meet multi-layered, multi – directional and multi-objective education needs of peasants, training contents should be integrated, practical training contents planned reasonably to avoid repeated training and ensure these trainings to meet various needs of peasants, only in this way, peasants will learn practical knowledge from the trainings and apply these knowledge in production.

Rural adult education consists of three major contents. First, anti-illiteracy education-basic knowledge education targeting at illiterates and semiliterates, and also various agricultural technical skill trainings; second, universal education for propagating culture, specialized technologies, economic management knowledge and laws among peasants, so they can adapt to the needs of agricultural economy and technological development; third, improvement education targeting at young and middle-aged rural adults with a certain cultural background, so they will become major

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3 Training models

3.1 Oriented training The oriented training means to train the labors according to the requirements of market or enterprises which will employ the labors after the training[4]. With the advantages of clear training target, the oriented training will effectively help the trained labors get employed.

3.2 Non-oriented training In contrast with the oriented training, the non-oriented training is to train the labors according to their own wills, but the training expense is still financed by the government and the majors are set by the universities so as to train them into the technical expertise who are in urgent need[5]. After the training, the labors will choose their own jobs. With the advantages of strong flexibility and wide range of job selection, the non-oriented training effectively promote the mobility and transfer of labor forces.

3.3 Self-employed training The self-employed of new labors has become increasingly popular. Since most of the labors are poorly educated, they lack money and professional skills to start their own business. The self-employed training aims to improve the ability of labors to start their business, such as the training of poultry breeding and agro-products processing, *etc.*. The self-employed training could not only get the labors self-employed[7], but also improve their awareness of creativity and transfer.

The young are the future and hope of a nation, to enhance their training will turn them into precious human resources, which is essential to both the development of market economy and modern construction. Vocational education should adapt to the social situation, and develop new training models to get the labors employed. It is a triple win strategy for the country, the enterprise and the labors themselves.

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forces in rural economy by mastering the knowledge and technologies demanded by modern agriculture.

3.2.3 Enhancing the training of management quality, cultivating new peasants with competent management capacity. New peasants should not only have adequate knowledge and master related technology, but also have the capacity of operating and managing relevant agricultural industries, and long - term experiencing of engaging in such industries. In promoting cultural quality, scientific and technological quality of peasants, comprehensive quality of a few elites should be particularly improved, so they will become foregoers driving the whole rural areas to the prosperity. That is, core peasants have to be cultivated as pioneers to support and promote sustainable development of regional agriculture and rural economy.

4 Conclusion

Against the background of global integration and popularization of information network, new technologies, methods and concepts should be applied to bring new ideas to the cultivation of new peasants, it is necessary for peasants to master modern information knowledge, marketing knowledge and skills. The production should be organized with market needs as the orientation, rural management teams should be cultivated to help peasants to avoid market risks, improve their bargaining power and competitiveness, and on this basis, cultured new peasants with competent management capacity and adequate knowledge will be cultivated.

Cultivation of new peasants is a highly-comprehensive and long - term systematic project, quality of peasants and development of modern agriculture is also a process of dynamic changes influenced by various internal factors and external environment. Therefore, to cultivate new peasants for modern agriculture, proper measures should be taken according to circumstances, theories should be integrated into practices, and all functional departments should cooperate with each other to ensure the cultivation of new peasants to meet development needs of modern agriculture.

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