

# On Problems and Countermeasures of the Employment of Postgraduates from Crop Science

—Taking Tianjin Agricultural University as an Example

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**Abstract**—With the reform of China's economic system, especially its deepening on agricultural economy, as well as a variety of employment needs emerged in the social market, limitations of crop science postgraduate students from agricultural college make them unable to meet the social demands for all-round talents, thus making the employment situation more and more serious. In order to better understand the employment status of postgraduate students from crop science in our school, this study designed a questionnaire on the employment status of postgraduate students from crop science, mainly involving difficulties and problems encountered in the employment process, and suggestions for postgraduate education in our school after employment. Through the analysis, we found that crop science postgraduates have suffered much pressure from employment due to their pessimistic employment status. Thus, some suggestions are put forward to solve their employment problems and improve their employment status in crop science.

**Keywords**—crop science, postgraduate students, employment problems

## I. INTRODUCTION

China has entered the stage of higher education popularization. From the perspective of social development, the cultivation of a large number of high-quality talents is compatible with the rapid economic development of China. With the deepening of the reform of education system in our country, however, our country's higher education has turned to the educational model adapted to the market economic system from the past educational model under the planned economic system, and employment distribution of college graduates has been featuring with unified division mode under planned economy system into independent employment and two-way

choice model under market economy system. The employment distribution of university postgraduates is no exception. In order to adapt to the development of our society, economy, culture as well as education, our country has adopted the policy of expanding the enrollment of postgraduates in time and achieved a great success during the process. To understand our school postgraduate employment situation for nearly three years, problems existing in the process of graduate education shall be grasped, and suggestions for the improvement of quality of postgraduate education in the school shall be put forward. Thus, we have designed a questionnaire named "employment status of crop science postgraduates from college of agronomy and resources and environment". In June 2008 postgraduates that graduated 3 years ago did the online questionnaire, through investigation, and more comprehensive and accurate results have been made. In this regard, we hereby make a report on the employment situation and problems of postgraduate students involved in this survey.

## II. EMPLOYMENT STATUS OF CROP SCIENCE POSTGRADUATES IN RECENT 3 YEARS

### A. Basic employment status of postgraduates

Crop science is one of the core disciplines of agricultural science, and is also the traditional discipline of our university. Generally, two main secondary disciplines of postgraduate major are crop breeding and crop cultivation. Table 1 shows the number and employment of postgraduates in the school of agriculture, resources and environment in 2016-2018. It can be seen that the number of postgraduates in the past three years is relatively stable, with a one-time signing rate of only 34%, and the number of students who choose to study for a doctoral degree accounts for 11%.

TABLE I. BASIC EMPLOYMENT STATUS OF CROP SCIENCE POSTGRADUATE STUDENTS IN COLLEGE OF AGRONOMY AND RESOURCE ENVIRONMENT IN TIANJIN AGRICULTURAL UNIVERSITY IN RECENT 3 YEARS.

Number of graduates	Number of employees signing agreements	Number of employees signing contracts	Year	Number of employees of other forms	Number of students entering higher education	Number of the underemployed
18	5	0	2016	12	1	0
20	8	0	2017	10	2	0
18	6	1	2018	6	3	2
56	19	1	In total	28	6	2
100	33.93	1.8	Percentage of graduates (%)	50	10.71	3.5

2017 postgraduates education reform research project of Tianjin Agricultural University (Project Number: 2017YJG011)

**B. Employment status of postgraduates**

Employment trends of crop science postgraduate students have been calculated in FIG. 1 and FIG. 2 according to their working locations and directions. Based on the results in the figure, most students choose to stay in economically developed cities, accounting for 72% of the total number. Among them, the choice of employment in the field related to these major accounts for 30%, and the choice of enterprises and institutions accounts for 32% due to the influence of social concepts, treatment and welfare and other factors. In general, remote western regions are still not attractive enough for postgraduate students, most of whom prefer to stay in big coastal cities to work.

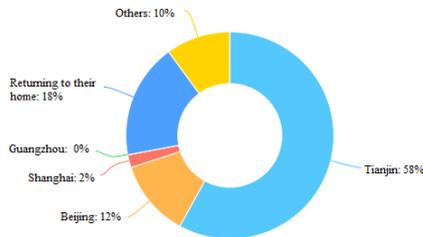


Fig. 1. City distribution of jobs after graduation

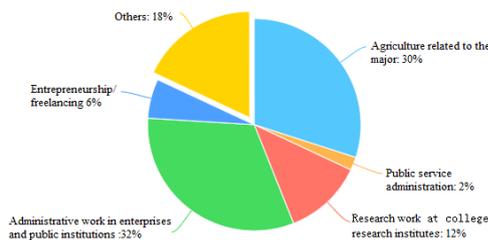


Fig. 2. Employment-related areas

**III. THE ANALYSIS OF ADVERSE FACTORS ON EMPLOYMENT OF CROP SCIENCE POSTGRADUATES**

**A. Single cultivation mode of crop science postgraduates**

Most local universities are confronted with the situation of small scale of postgraduate students and great pressure of scientific research from tutors. As a result, most postgraduate students spend much time doing experiments and writing academic papers, then causing a lack of training and exercise in production practice. There are many general courses for postgraduates, which are disjointed from local agricultural needs, have no obvious characteristics, and are unable to expand students' knowledge level. Compared with other 211 and 985 postgraduates, they have no competitive advantages, and are often hard to serve local agricultural economy [1]. Crop science is an applied discipline. Most of the postgraduate training programs of local universities have set social practice, teaching practice and other courses. However, in the specific implementation process, these practical courses are often formalized and fictitious, which fail to achieve the established training objectives. In terms of the hardware facilities for students' internship, local colleges and universities also lack the practice bases for graduate students and the internship as well as employment units of school-enterprise cooperation. In the

social practice 60% of the students did not participate in social practice or participated in only one item. In the questionnaire survey, 60% of students considered internship experience as the most important factor for finding a job, which is bound to result in the basic lack of specialty with local characteristics made by colleges and universities for local economic and social development, and the cultivation of students' industrial ability is difficult to meet the needs of local characteristics, thus resulting in the disconnection between talent cultivation and local needs. Fig 3. shows that how many internships participants in during the postgraduate period.

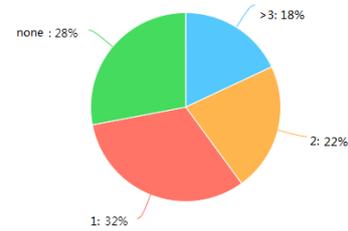


Fig. 3. The proportion of students participate internship

**B. Lack of effective management system for postgraduate employment**

Undergraduate education is the main level of local agricultural colleges and universities. Due to the small scale of postgraduate education, it has not received the same attention as undergraduate education. The employment of postgraduate students is not equipped with the guidance from professional teachers in the employment office and generally, and the head teachers in the college are appointed to conduct unified management, which cannot provide special guidance on employment problems. It lacks professional and systematic employment guidance knowledge and the ability to develop and recruit postgraduate students. There is little recruitment information at the postgraduate level. Employers invited by the school to participate in campus recruitment from agriculture-related enterprises and institutions are mostly undergraduates, and there is a lack of student information feedback mechanism at the postgraduate employment unit. Graduate tutors are the first persons responsible for postgraduate education. At present, most of students' cultivation by tutors in colleges and universities is still in the initial stage of assisting students to complete their studies, and the profound ideological and political education, emotional exchange and employment training for graduate students need to be further improved. According to the results from which channels the final work was implemented in the questionnaire, mentor recommendation and social recruitment websites accounted for 62%.

**C. Insufficient career planning education**

Crop science postgraduate students in local colleges and universities take up a certain proportion of the transferred admission. Most of these students take the postgraduate entrance examination to avoid employment pressure or simply improve their academic qualifications in order to find a more stable job, lacking the goal of postgraduate study. At the same time, due to inferior country mark line of agronomy, its

enrollment quality differs, and often causes students not to understand their major advantages, also not to know their conditions according with the requirement of which post after graduation. Agronomy is a discipline with strong practicality and due to heavy study and scientific research tasks, postgraduates do not have enough time to participate in social practice and production practice, so they are not familiar with the employment requirements of enterprises in the future. At the same time, many local colleges and universities do not have career planning courses at the postgraduate level, and the training of postgraduates' employment teachers is not enough. The employment guidance for postgraduates is often limited to the release of employment information and the submission of employment data, lacking of systematic guidance in psychological counseling, employment policies, employment skills and other aspects. Although some schools have set up elective courses such as "career planning", their teaching is of a mere formality and the courses are not well targeted. Students do not really form conscious thinking or then put it into target action because of elective courses.

#### *D. Inaccurate positioning of crop science postgraduate students in employment*

Crop science postgraduates do not actually agree with the employment prospects of their major. It's because the employment of agriculture majors cannot leave "farming", and their working places are either remote areas, or urban suburbs. Despite the higher education has been accepted, the employment idea of crop science postgraduate students is still relatively conservative, and their job objectives are still in economically developed cities, and the eastern coastal area, rather than the basic positions of employment since units at the grass-roots level are relatively backward, and their treatment is not high. Employment expectations remain high and the concept of employment cannot keep pace with The Times. Urban students will not give up superiority and convenience after long accustomed to the city life, while rural students, not always easy to enter colleges, which means out of the ground floor, and into the "palace", are still of a great burden after entering, and they are also unwilling to return to rural employment. Therefore, no matter urban students or rural students, they are not willing to settle down to "farming", and would rather choose to be employed in the cities, regardless of professional counterparts. In other words, the study of agriculture-related majors plays a role of "springboard" for them and the low matching rate between majors and employment has laid a hidden danger for secondary unemployment.

#### IV. EMPLOYMENT COUNTERMEASURES OF CROP SCIENCE POSTGRADUATE STUDENTS FROM AGRICULTURAL COLLEGES AND UNIVERSITIES

##### *A. Optimize the discipline structure and improve the quality of talent training*

Optimizing the discipline structure is the premise of improving the quality of postgraduate education and employment. Higher agricultural colleges and universities, especially local agricultural colleges and universities, should enhance their adaptability to local economic development. Agricultural colleges and universities should conduct regular

research, fully understand the local economic development situation, combine their own teachers and students, correctly position the professional curriculum and personnel training objectives, give play to the comparative advantages of school disciplines, strengthen the characteristics of running schools, and improve the quality of personnel training. At present, as the general lack of local agricultural technical personnel and rural economic management talents, especially local colleges and universities with both high-quality talents should actively response to the national education policy, and make efforts to expand the scale of professional degree. At the same time they should consciously conform to the needs of the development of the national postgraduate education according to the trend of current social and economic development, consciously adjust disciplines and specialties, dynamic adjustment enrollments, and reduce some of the less competitive, social adaptability of unpopular professional [2]. In terms of talent training model, it is necessary to establish compound talent training mode, strengthen overall education of research and application, and cultivate high-level talents suitable for the development needs of market economy. They should pay attention to the traditional classroom teaching, and strengthen the practical teaching strength; In terms of hardware facilities, while improving the scientific research platform, they should expand the postgraduate production practice base and social practice projects; In the cultivation of innovation ability, they should attach importance to academic research, deepen the implementation of social production practice, and combine scientific research innovation with social practice in depth.

##### *B. Combine the characteristics of the major, cultivate students' innovative consciousness and improve their comprehensive ability*

With the development of China's economy, enterprises and institutions have increasingly higher requirements for college students, and college graduates are facing a grim employment situation. In the process of job-hunting, employers also prefer to accept students with strong comprehensive quality. Therefore, in the process of agricultural professional talent training, agricultural colleges and universities should aim at the characteristics of agricultural students and the changing characteristics of social demand for talents so as to comprehensively improve the comprehensive quality of students. On the one hand, professional education as well as ideological and political education should be combined to strengthen the moral cultivation of agricultural students. Through the role model, theme education, social practice and other ways, students' noble sentiments and lofty aspirations shall be cultivated; Through subtle influences, students' interest in learning shall be stimulated, and the enthusiasm and initiative of students learning shall be fully mobilized; On the other hand, the cultivation of innovative and practical abilities of agricultural students should be highlighted. Starting from the reality, based on professional knowledge and by means of scientific and technological innovation activities, the innovative and practical consciousness of students will be strengthened, and the students will be trained into high-quality application-oriented talents with strong professional practical and innovative abilities.

*C. Further strengthen employment and entrepreneurship guidance, and guide students to establish a correct view of employment*

Career planning for postgraduates is not only an important means to promote the employment of postgraduates, but also an important way to help students set correct goals for postgraduate study, lead them to complete the tasks of study and scientific research, exercise their production and practice ability, and then promote their overall development. The career planning education in agricultural colleges and universities is particularly important as a highland for the cultivation of technical application talents in the field of crop science. Most of the students in the field are from the countryside, and learn career planning education only in undergraduate period and their professional design concept is insufficient or even missing in life. Therefore, in view of the students with different characteristics, agricultural universities and college should positively advocate policies of the party and the state, strengthen the understanding of agronomy students on the specialty and the agricultural development of our country, improve their interest in learning, actively guide them to set up the correct outlook on life and values, adjust the employment psychology, position accurately, and correctly guide students greatly work for future. Secondly, the employment system and the professional team of employment guidance teachers shall be established and improved to constantly improve the ability of employment guidance teachers, promote the professionalization of employment guidance services, and actively guide students to exercise and grow at the grassroots level. Agricultural colleges and universities should also open up employment channels, strengthen entrepreneurship education, and cultivate students' entrepreneurship awareness and ability. Internship opportunities for students at the grassroots level shall be

increased so that they can experience life more at the grassroots level, and make the countryside a promising field for agricultural talents. Students ready to start businesses in various forms in the countryside at the grassroots level shall be actively guided to create a world of their own.

#### V. CONCLUSION

In a word, the improvement of the employment quality of agronomy postgraduates in local colleges and universities is a complicated and long-term project, which requires the joint efforts of schools, society and families, as well as the support of national policies and systems. Only by innovating management ideas and committing to the reform of education and teaching can graduate students improve their employ-ability and change their employment concepts. Only in this way can postgraduate students of crop science be transformed into agricultural talents full of energy and vitality, with strong attraction and influence, and promote the better development of agricultural disciplines in agricultural colleges and universities.

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