Analysis and Discussion about Quantitative Grading Standard for Salary Promotion of Agricultural Scientific Researchers

Xingquan ZOU, Jia ZHANG, Chengxing YAN, Mingjing QING

The Chongqing Three Gorges Academy of Agricultural Science, Wanzhou 404155, China

Abstract  The existing performance salary system has several grades in the same job title. When the number of workers qualified for promotion is more than the target, quantitative grading is usually adopted to determine salary promotion personnel. Scientific, fair and reasonable grading content and standard directly concern income and remuneration of scientific researchers, and also concern recognition and respect degree of contribution made by scientific researchers. Therefore, quantitative grading standard is of the utmost importance to keeping stability, arousing enthusiasm and creativity of scientific researchers, and promoting smooth development of scientific research. Achievements awarded, papers published and project research can reflect scientific research level, ability and working performance of agricultural scientific researchers. This paper takes these three items as examples, analyzes, discusses and compares the establishment and evaluation of quantitative grading standard. It states that "one yardstick" and "one vote veto system" should be adhered to when evaluating using the quantitative grading standard. It is expected to provide reference for organizations of the same trade in establishing quantitative grading standard and conducting evaluation.

Key words  Salary promotion, Grading standard, Achievements, Papers, Project research

1 Introduction
Since the transformation of salary system of workers in public-sector organizations from original post – rank salary system to post performance salary system[1], in the existing performance salary system, there are several salary grades in the same job title. For example, the salary of associate professorship (such as assistant researcher and senior agronomist) has 5, 6 or 7 grades. In an agricultural scientific research institution, the amount of salary for professional title grades is assigned by the superior personnel department in accordance with targets. In the same professional title grades of an organization, if the number of workers meeting basic conditions for salary promotion specified by superior document is more than vacant target, there will be competition. In such situation, it is usually determined as per scores openly given according to quantitative grading standard for salary promotion of agricultural scientific researchers. Different organizations will have different quantitative grading standard for salary promotion of agricultural scientific researchers, and major contents and focuses of quantitative grading standard will be also different. Whether an organization establishes fair and reasonable grading content and standard is an important factor influencing satisfaction of scientific researchers. It is also directly connected with income and remuneration of scientific researchers, concerns performance of scientific researchers, and concerns recognition and respect degree of contribution made by scientific researchers to the organization[2]. Therefore, how to establish suitable quantitative grading standard and content for salary promotion of agricultural scientific researchers is of utmost importance to keeping stability, stimulating enthusiasm and creativity of researchers, maintaining scientific research vitality, as well as promoting smooth development of scientific research. Achievements awarded, papers published and project research are three items that can best reflect scientific research level, ability and working performance of agricultural scientific researchers. Thus, this paper takes these three aspects as starting points to conduct analysis and discussion, in the hope of providing reference for organizations of the same trade in establishing quantitative grading standard and conducting evaluation.

2 Analysis on grading standard of achievements awarded, papers published and project research
2.1 Analysis on grading standard of achievements awarded
Since China resumed and reestablished national science and technology incentive system after the National Conference on Science in March 1978, provinces and cities have formulated corresponding incentive methods for scientific and technological achievements, to award provincial and municipal level scientific and technological achievements[3]. Scientific and technological award level of China generally includes national level, provincial and ministerial level, and city department level. Except the national level, other award level has the first, second and third prizes. At present, agricultural scientific research institutions generally adopt following methods to evaluate quantitative grading standard for salary promotion of scientific researchers; (1) setting different quantitative grading standard for different levels of awards; (2) setting quantitative grading standard of decrease progressively for different levels of the same grade; (3) treating the first prize of the inferior grade as the same of the third prize of superior grade. These methods are worthy of discussion. Firstly, different levels of achievements awarded are greatly different in difficulty of obtaining. Take ministerial and provincial level awards as example, although for the same grade of ministerial and provincial level
2.2 Analysis on grading standard of papers published

As major products of agricultural scientific research, agricultural sci-tech and academic papers are survey reports written on the basis of researches on a certain agricultural issue, or laboratory report made after scientific experiment of certain question, or experience report written on the basis of summary of certain experience. Agricultural sci-tech and academic papers may also be papers made on the basis of strategic thinking in theory for certain question which is not tested or practiced but depends on certain theory or reference to documentary materials. Quantity and quality of these papers are major criteria for judging and reflecting agricultural knowledge amount and agricultural sci-tech development. It also reflects scientific research level of an organization. In addition, quantity and quality of papers published are major indicators for judging academic level, research strength and business performance of a scientific researcher, and also one of most important criteria for annual evaluation of an organization. When an agricultural scientific research institute establishes quantitative grading standard for salary promotion of agricultural scientific researchers in the aspect of papers published, from the perspective of fairness and reasonableness, it should firstly set up a complete set of grading standard scientifically and accurately. According to property and tasks of agricultural scientific research institutes and through analysis and research of types and grades of periodicals, we believe that following division of grades is suitable for scientific research institutes establishing quantitative grading standard for salary promotion of scientific researchers in the aspect of papers published. First grade; Science Citation Index (SCI) periodicals; Second grade; Chinese Science Citation Database (CSCD) periodicals; Third grade; other core periodicals; Fourth grade; general periodicals. Secondly, from the perspective of an organization, to stimulate and encourage scientific researchers to write and publish papers, it should widen the gap between the first author and other authors, and give the second and third authors the same score when establishing the quantitative grading standard. For example, suppose the highest score of a certain paper is 3 points, then it should give the first author 3 points, and the second and the third authors 1 point. Adopting this method is intended to prevent the problem of other authors' getting a lift and discouraging enthusiasm of real author for writing papers. Thirdly, when evaluating papers published by scientific researchers, it should treat participant and those getting a lift differently. Generally, authors other than the first author are just research or experiment participants, so they should be given different scores. For those authors getting a lift or completely irrelevant with the research, lower score or no score should be given in accordance with actual situation, so as to improve academic atmosphere and improve moral quality of scientific researchers.

2.3 Analysis on grading standard of product research

Scientific research projects are pillars of scientific research institutes and fundamental part for survival and development of scientific research institutes. Without key and important research projects, science and technology will not be improved rapidly; without numerous project research, it will fail to guarantee level, connotation and quality of scientific research; without promotion of key projects and major programs, it will not form excellent talent team and key disciplines. According to levels of administration of departments to which scientific research projects are assigned, scientific research projects generally are divided into national level, provincial and ministerial level and district (department) level and other levels. It is known that the difficulty is national level > ministerial level > provincial level > district (department) level in project establishment. Therefore, in the establishment of quantitative grading standard, it should firstly rank the level as per difficulty and widen the score difference of different levels. Secondly, the success in establishing a project is closely related to post, scientific research level and working ability of scientific research, performance and communication ability of the project chairman. To stimulate and encourage scientific researchers, especially backbone scientific researchers and pace-setters in scientific research, to actively participate in project application, the research institute should increase intensity of inclination to project chairman when formulating the quantitative grading standard for salary promotion of scientific researchers.
3 Discussion about grading standard of achievements awarded, papers published and project research

The fundamental approach for agriculture is science and technology, the spirit of science and technology is innovation, and the key of innovation lies in talent. Quantitative grading standard for salary promotion of agricultural scientific researchers is directly correlated to income and remuneration of scientific researchers. Thus, to study and establish scientific, fair, just, open, reasonable and operational quantitative grading standard for salary promotion is a great task concerning stability of scientific research institutes and sustainable development of scientific research.

3.1 Weight of achievements awarded, papers published and project research in score setting When establishing quantitative grading standard for salary promotion of agricultural scientific researchers, it should set the score according to importance, difficulty in getting the award, and contribution to development of scientific research. Take Chongqing Three Gorges Academy of Agricultural Science as an example, in 2001–2010, this academy obtained 18 scientific research achievements in total (about 2 projects annually), approved establishment of 146 projects (about 15 projects annually), and published 207 papers in various levels of periodicals (about 21 papers annually). It can be concluded that the score should be achievements awarded > project research > papers issued.

3.2 Sticking to "One yardstick" principle in establishing grading standard and during evaluation The "One yardstick" principle means that agricultural scientific research should be followed in establishing grading standard and during evaluation. When treating the problem of fairness and reasonableness, it should stick to fairness and the "One yardstick" principle. When there are first author and correspondence author, it should give the highest score to the first author and less or no score to other authors.

3.3 Sticking to "One vote veto" principle in establishing grading standard and during evaluation In an organization, due to limitation to salary promotion target authorized by the superior authority, where only one score is allowed in case of the same score from two or more evaluators, it should stick to the principle of "One vote veto". This principle is a method to determine the final winner by one vote. The evaluation items can be project (if any) chaired, number of projects chaired, level of projects, level of achievements awarded, first-author papers published, and level of first-author papers published. From comparing these items, the final winner will be determined by the "One vote veto" principle.

References


(From page 110)


[3] HE IJ. Study on the operating mechanism and mode of vocational education training base under the background of cooperation between school and enterprise"

About KIT

The Royal Tropical Institute (KIT) in Amsterdam is an independent centre of knowledge and expertise in the areas of international and intercultural cooperation, operating at the interface between theory and practice and between policy and implementation. The Institute contributes to sustainable development, poverty alleviation and cultural preservation and exchange.