Some Aspects of Training of Engineering Staff for Land Reclamation

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***Abstract*-The article deals with the issues of education methods application in the advance professional training system. On the base of practical experiences of the authors there is discussed the level of engineering skills of the specialists in farming and the order of training the working staff in the branch of land reclamation. The accent is made on the need of training methods discrete choice, the use of interactive training methods, the role of state structures in the working staff training in land reclamation in Russia is stressed. The authors are offering a methodical approach to students groups forming and training programs development. There are shown some cases and statistical data of APT monitoring in Russia.**

… here you are the facts! And why? We don't invent hypothesis!

G. Galileo

Keywords-additional professional training, training methods, distance learning, training programs, specificity of farming, workers, experts in land reclamation, offers and comments, statistic data, intense training

I. INTRODUCTION

The results of questionnaire of the experts, responsible - for hydro - land reclaiming systems and irrigation equipment operation, performed by Training and Methodic Center for Additional Professional Skill of Federal State Budget Research Institution "All-Russia Scientific and Research Institute for Irrigation and Farming Water Supply Systems "Raduga" (henceforth referred as "the Center") became the cause of a new regard on the working staff condition in farming and especially on their training in the system of advance professional skill training in the field of land reclamation.

Contacts of the scientists in land reclamation and the Center teachers with specialists working in the field of hydro-technical structure operation nowadays became non-systematic and less productive. The advanced skill training of the working staff in land reclamation often takes place without live contact with the scientists and teachers - experts, it is caused by wide using of "distance learning" methods that is the form of correspondent training.

II. MATERIALS AND METHODS

The personal attention of working specialist to getting advance professional skill is quite definite. On the one hand he is thinking of preserving of - his working position, planning going up his career ladder, connected with his salary rise, and on the other hand he understands that it all depends on his boss decision, who wishes that organization should operate in a stable mode, without turning the employees away for on-campus training. In this context the decision of the boss of institution (a credit manager) to train his employees in a correspondence mode (i.e. using of the distance learning) is quite sensible as the training is connected with expenses at the limited financial possibilities of the state budget organization.

The distance training of the experts having middle special or high education means that potential students have a material and technical basic facilities necessary for training realization. The potential students should have at least: a personal computer with periphery, a web-camera and stable internet connection, to ensure the contact of the teacher with the student with proper speed and in essential volume. The objective facts are as follows: the technical equipment of the experts in farming living far away from the training centers leave much to be desired and in many cases is not stable, that highly decreases the training quality.

Without any doubt, the distance training can be used in the learning process, but it should be used in each case selectively and reasonably. Not all the programs used for the advance training and retraining can be realized by the distant learning. They should be chosen reasonably. And it is clear that it is enough just evaluate the title of the program, without going into its details.

The realization of specialist training programs in farming production is not possible without live communication of the specialist- teacher and the students-practitioners, as well as without special studied objects. The base of training is interactive connection. It is clear that the choice of training form and methods in the system of advance professional training should be regulated on the State level. There is a perfect example of the State influence on the training process in the field of medicine, nuclear energy and state security. The initiative here should belong to the Ministry of Education and Science of the Russian Federation.

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The Ministry of Agriculture of the Russian Federation, as a State Body, annually delivers sufficiently large sums of money on the advance professional training of its specialists and plans (regulates) the quantity of students that is reflected in the State Task for the institutions dealing with training. The least task – we need the operational reaction of the branch authorities on the training organizations offers because they (immediate bosses) estimate the quota of the students, the training trend (the program) choice and are responsible for the stable work of the organization during the period of the absence of experts who has been sent for on-campus training. There is some progress in this problem. For example, the number of claims for training of FGBU Administrations on Land Reclamation in 2018 on the expense of Ministry of Agriculture of the Russian Federation far out numbers the planned one given in State Task.

Peculiarity of farming is reflected in the choosing of the training periods (a season). The most proper time for farming experts training is the period between seasons: early spring, when there are no finance for in-campus training trip, or late autumn when there are some finance but the boss is thinking of the best way to spend it.

Analysis of content of resume - claims for training sent in 2016-2017 from FGBU Administrations on Land Reclamation shows a shortage of the skilled stuff (specialists having a diploma) that leads to the problem that working personnel have a lack of knowledge on using of modern irrigation equipment and methods of its operation, used to growing of different farming crops.

As the most "advanced" training form in the system of advance education we mean "the travelling school". Its efficiency is straightly connected with the interest of the republic, region, district and city authorities and the land reclamation institutions themselves, to provide continuous expert staff education up-grade level. This interest is a base of successful training organization activity offering a list of actual (claimed) advance skill training programs. In this aspect the Training Center task is in activation its promotion activities content of which should provide interest to the offered training programs.

The weak point of advance training system is a problem of ensuring mutual relations between FGBU Administrations on Land Reclamation and Training Centers is the fact that there is no database uniting their efforts, on account and order of specialist advance training and retraining course doing. Such database creation is strongly necessary because it should make possible planning the personnel work in the enterprise, as for the training institutions, it would allow them having a real calendar annual training scheduling and planning their activities including future expense. To reach that goal we should just have the inverse link, that means a timely answer of the enterprise bosses to the request of the Training Center to provide the proper information on their experts doing advance training or retraining course.

III. RESULTS

The summary of practical activities of the Training Centre for last five years allowed formulating the main principles of group formation for the students, namely the bosses and specialists in accordance to the advance training programs. The principle of student selection by "the same position category" gave good results in practice, and when the contingent was heterogeneous, we used the principle of "some program topics priority". Their application gives the maximal effect at the training program learning. This novation sense is in fulfilling of the step-by-step activity of the training program promoters, including:

-learning of the profession, position of the specialist and his duties;

-introduction to the training standard, according to the specialization and the specialist training trend;

-evaluation of compatibility of the given programs DPO with GOS or FGOS according to the training period and certain psychological level of training load limit according to the form of training material delivery and its presentation rate;

- selection of training methods and training facilities;

- specification of topic priority and program subjects;

-specification and correction of the program choice made by the specialists;

-testing of the program goal matching to the list of the given tasks and the demands of the training service Customer;

-testing of the program subjects list on the correspondence to the student skill (competence) level;

-testing of the program structure and content to the valid standards;

Such step-by-step sequence enables not to make mistakes in the choice of competence that is to be perfected in the training process.

IV. DISCUSSION

The Ministry of Agriculture of the Russian Federation has developed a Special Federal Program "Russian Farming Land Reclamation Development in 2014-2020" (Henceforth referred as "Program") assumes to preserve existing ones and creation of the new 92.89 thousand of working places using high-technology equipment for farming goods producers by means of existing farming lands productivity rise and putting the new ones into productive use. Preserving of the existing working positions and creation of new ones means qualified personnel providing. So we may speak about the level of stuff training adequacy to the given task complexity. And there comes up the problem of certification of working personnel, as the base of the farming professional stuff, and if there is a necessity, of their training. To our regret, the issues of stuff professional level testing

and continuous training of the specialists in farming didn't find place neither in the Program nor in the other documents dealing with the contacts between Ministry of Education and Science of the RF and Ministry of Agriculture of the Russian Federation [1,2].

A case in point sowing the level of professional skill of experts working in land reclamation may be a result of All-Russia Professional Skill Competition "The Best in the Profession" where took part the Federal State Budget Institutions for Land Reclamation and Farming Water Supply and Scientific, Research and Design organizations; this competition was organized in advice of Land Reclamation Department of the Ministry of Agriculture of the Russian Federation in 2016. There are 92 of such organizations in the branch, but only 17 organizations or 18.5%, answered to the invitation to take part in the competition. Speaking about the number of experts claimed to take part in the competition, there were 67 persons in 67 nominations. But in fact the number of competitors who really took place in the competition (they were examined on theoretical and practical skills) was 30 persons or 44.8 % from the number of experts claimed to take part in it. So there are the estimated results of inverse link that, of course have some cause.

In All Russia Conquest "The Best Working Dynasty in Land Reclamation" organized by propose of Land Reclamation Department of the Ministry of Agriculture of the Russian Federation in 2016 took part 21 family-dynasties. But the total number of specialists working in the field of land reclamation is about 15 thousand.

Without contact with his "brothers in trade" the specialist of farming enterprise is degrading. So it is absolutely imperative to organize regularly in the beginning or in the year of academic (calendar) year short-term advance training courses on the base of the Training Centers of the Ministry of Agriculture of the Russian Federation in the format of 2-3 days sharing experiences workshops.

The motivation for potential students of advance training and retraining courses is very simple. Every expert having a diploma asks himself: "What will have I got after studying in advance training or retraining course?"

According to statistic data:

-for students having salary "less than middle" the getting of additional education doesn't influence their income, but it preserves their job;

-for students with "middle level salary" the additional education raises their income in 1.5%;

-for students having salary "higher than the middle level" their income grows in 17.2 %;

-for students with "high level" salary their income grows in 34%;

-additional education is professional career stabilizer and it ensures increasing of a worker safety on the labor market [3].

The only thing that is absent in the given situation is the State support in preserving the working staff by creation of "secure" working positions with the proper salary [4].

Recently there came up a widely spread practice in the field of reclamation of giving jobs to people not having proper training in technical subjects. But these people are considered to be responsible for condition of such dangerous objects, as land reclamation systems and hydro-technical structures.

The level of the specialists and the bosses skills in the field of land reclamation, especially of hydro and land reclamation objects security providing is very low nowadays. The statistic data show that the number of the bosses and specialists working for FGBU Administrations on Land Reclamation sent to the in-campus training courses finished with certification in the supervisory bodies decreased dramatically up to 1% of the branch working staff total number. For some reason the experts in land reclamation do their advance training courses "at home" – in the regional, not general, organizations that are providing the training without educational operations license and besides they are accumulating the finance delivered by Ministry of Agriculture of Russia for training of its experts.

The results of monitoring (a social enquiry) of additional education condition in Russia in 2016 provided by Russian Academy of National Economy and Civil Service at Russian Federation President show the following important aspects [5]:

1. The superiors of different level are trained more often than the other.

2. The share of trained workers in farming is the least in comparison with other branches – 4,1 – 4,5%.

3. The budget branches are the example of positive State influence on the additional training system.

4. In the majority of enterprises the workers can get additional professional training but they don't know much about it.

5. The organizations weakly response to the offers of training bodies. To get the result training body should "lead" the organizations up to the certain level. Everything depends on the boss decision.

6. The main source of payment for service of additional professional training is organization finance.

7. The cause of getting additional professional training by working staff of the organization is realizing by the boss that he is breaking the law.

8. The distant training has got the low mark as preferred training variant, (4,1 - 6,2% of the respondents).

9. The choice in off work training is preferable from the point of view of the boss.

10. The motivation of training in the additional professional education system is supported by the dream of the worker to get larger salary, career growth and guaranty that his working position will be preserved.

V. CONCLUSIONS

There are a lot of problems connected with advance training and retraining courses for bosses and experts and there are the following ways of their solving:

1. The choice of training form and education technology with the program on additional professional education should be made differentially.

2. When planning of state expenses on training of bosses and specialists in agriculture it is necessary to use database of educational bodies made together with production organizations.

3. Standard costs on state training service in the system of additional professional education should be calculated for one student.

4. The additional professional training in farming system should be supported by the close contact of Ministry of Agriculture of Russia with the Ministry of Education and Science of the RF and to be reflected in the content of the forming Federal Special Programs.

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