Journal of Studies in Social Sciences ISSN 2201-4624 Volume 4, Number 1, 2013, 52-75



## Economic and Social Reserves Rationalization Jobs Based on their Attestation

## Leonid Kovalev $^1$ , Igor Kovalev $^2$

<sup>1</sup>Belarusian State Agrarian Technical University, Minsk, Republic of Belarus <sup>2</sup>The Institute of System Research in Agro-industrial Complex of NAS of Belarus, Minsk, Republic of Belarus

#### Abstract

This article addresses the need to work on job evaluation, which is an important means to improve the efficiency of the agricultural enterprise and social adaptation of workers. We study the problem and discuss some of their solutions related to certification and rationalization of employment service enterprises agrarian industrial complex of the Republic of Belarus. The substantiation of the economic and social feasibility of the work at the plant to improve the organization of labor, which provides significant savings reserves, primarily save time and labor in agriculture.

*Keywords:* certification of the workplace, the rationalization of the workplace, technical service, maintenance and repair.

#### Introduction

Influenced by of existing market conditions, changes in the functioning of the subdivisions and technical service companies agro-industrial complex. From policy and administrative management with a certain set of constraints in the economic activity of enterprises, the economy across the industry moves to a market model. According to some sources, the organizational factors enterprise performance is approximately one-third of the total effect of activity generated from the implementation of the "internal" reserves the effectiveness of the enterprise and a significant proportion of this belongs employment factors that are associated with the improvement of the organization of labor collectives and directly each individual worker.

It should be noted that the organization of labor in terms of complexity and scientific approaches to their solution to domestic enterprises agro-industrial complex of today is not given due attention. This is largely due to the fact that for the first stage are the most pressing, problems of production and marketing of local producers find their place on the international markets. However, efforts to improve the organization of work, carried out deliberately and systematically, provides significant savings reserves, which at first glance may not be visible.

First of all, it saves time and labor. One way to achieve these goals is the certification and rationalization of jobs. Study of the topic and the subject of this paper. The theme is quite extensive and multifaceted, we try to define a number of key issues and problems, and possible solutions. At present, unfortunately, issues regarding attestation of workplaces, not fully explored. This is mainly due to two factors: first, the imperfect methodological support job evaluation, and secondly, not enough attention is paid to this issue in the agricultural service enterprises.

This work is based on research conducted in 27 regional agricultural repair and service companies in the Republic of Belarus, including by region:

Brest - JSC "Brest" District Agricultural Service, JSC "Ivanovo" District Agricultural Service, JSC "Pruzhany" Regional Agricultural Services; Vitebsk - JSC "Glubokskiy" District Agricultural Service, JSC "Verkhnedvinsk" District Agricultural Service, JSC "Orsha" Agricultural District Service, JSC "Vitebsk" District Agricultural Service"; Gomel - JSC "Gomel regional agricultural service", JSC "Rogachev agricultural service", JSC "Rechitsa agricultural technical service", JSC "Svetlogorsk agricultural service", Company «Mozyr agricultural service", Grodno - JP "Berestovitskaya agricultural machinery", JSC "Grodnopromtehnika", JSC "Smorgonsky agricultural service", DP "Slonim agricultural machinery", "Lidsky agricultural technical service", Minsk - ICPO "Minsk PMK", ICPO "Staubtsy PMC", JSC "Molodechno" District Agricultural Service, JSC "Slutsky" Regional Agricultural Services; Mogilev - JSC "Agropromnaladka", JSC "Klimovichi PMK" Selspetsmontazh", JSC"Glusk district promtehsnab", JSC "Gorki District Agricultural Equipment Industry", OJSC "Shklovsky" District Agricultural Service.

Also work is based on current practices and recommendations on accounting and evaluation organization, certification and rationalization of jobs, one of the authors developed.

#### METHODOLOGY

The main purpose of certification and rationalization of jobs produced in enterprises maintenance in agriculture - is to increase the efficiency of the repair of production, improve the quality of maintenance and repair of equipment and livestock production and management of human resources by:

acceleration of productivity growth by bringing jobs to the requirements of scientific and technological progress, as well as reduction of manual and heavy physical labor; improving the use of active fixed assets by eliminating unnecessary jobs, technical re-equipment of workplaces which use obsolete equipment, tools, machinery, to ensure a balance of jobs and workers and improve the coefficient of the shift index;

improve working conditions and safe production in each of jobs, improve the culture of maintenance of production;

increase of social activity and qualifications of employees, their involvement in the management, including the assessment of the level of technical service and to identify measures to improve it.

The main objectives of evaluation, rationalization and accounting jobs are:

determination of actual technical, organizational characteristics of jobs and comprehensive assessment of their compliance with the requirements of advanced solutions and regulatory and technical documentation;

identify jobs that do not meet regulatory requirements or progressive solutions in engineering, technology, organization, environment and safety;

development of organizational, technical measures to streamline or eliminate inefficient jobs, morally and physically obsolete machines through better use of the most productive, combining professions, accommodations devices and productivity tools, mechanization, etc.

Work on the job evaluation preceded by an analysis of the applied technological processes, production, labor and management in general, the repair service to identify innovative, best ways to improve the regulatory framework, development and approval of the management organization and technological rules for the implementation of the main types of work, the definition of a list of essential types of work performed on individual jobs.

Accounting jobs is the first phase of work on their certification and provides a definition of jobs, their classification and grouping by type and character of use, categories of workers employed therein.

Certification of workplaces is a set of activities, including a comprehensive assessment of each job on its compliance with the advanced scientific technical and organizational level, providing increased productivity and high quality equipment repair.

Rationalization of jobs is a set of organizational and technical measures aimed at improving the existing jobs, improving their use, improved maintenance and productivity, working conditions and quality of repair equipment.

Scheduling jobs is a calculation of the optimal number and structure of employment in order to ensure balance in their labor force employed in the repair and service enterprises livestock.

Organization of work on the integration, validation, and streamlining the administration of the job of repair and maintenance of the enterprise together with trade union committees with broad involvement of staff and workers, inventors and innovators, workers labor protection and safety.

Frequency and time-bound job evaluation established by the Ministry of Agriculture and Food of the Republic of Belarus at least once every five years.

Workplace - the workspace, equipped with the necessary means for the work activity of the employee or group of employees that perform production tasks. In order to ensure the completeness, accuracy and comparability of the results taking into account the following basic classification features jobs:

by category of workers - the jobs of workers, employees;

number of employees - both individual and collective;

the degree of mobility - stationary and mobile.

Under the collective means a workplace, which employs several employees that perform one or more related processes in time for the maintenance and repair of machinery and equipment.

Stationary jobs - it jobs that do not change their position in space (fitters, welder, etc.). Mobile jobs - are places that change their position in space as you complete maintenance and repair of machinery and equipment directly on livestock farms and complexes (plumbers, electricians, gas welders, etc.).

Certification Commission sets corresponding to the name of occupations and positions of employees, according to the Classification of the Republic of Belarus "Professions employees," approved by the Ministry of Labor and Social Protection of the Republic of Belarus of 22 October 2009 No 125, also sets the characteristics of works on Single classifier works and trades workers approved by the Ministry of Labor and Social protection of the Republic of Belarus on March 30, 2004 No 34 and on the Common Classification of posts employees, approved by the Ministry of Labor and Social protection of the Republic of Belarus of 30 March 2004 No 32, as well as compliance with the general classification of economic activities in the Republic of Belarus.

Planned number of individual jobs is calculated based on the regulatory complexity by type of work and facilities or number of regulations.

All jobs are counted, regardless of whether they are used in one, two or more shifts. For jobs that are not used during the plan period, indicate the average value for the year of its operation.

Labor Organization - a system of measures to ensure the rational use of the labor force, which includes the right balance of people in the process of production, exchange and cooperation, methods of regulation and incentives, workplace organization, maintenance, and necessary conditions.

Workplace organization - a system of measures to equip the workplace machinery, equipment, spare parts, technological and organizational accessories and their location in a particular order.

Workplace organization - providing it with the necessary for a comfortable and efficient execution workflows machines, instruments, technology, and organizational affiliation.

Disposition of the workplace - this is a rational distribution of production areas, workers, materials, process, and organizational supplies and equipment necessary to perform the work process.

technological packages - these are technical means to equip the job of the number, qualification and professional staff to perform work on an approved technology and standards of performance.

The collective and individual workstations for each facility, business unit, repair service facility is in accordance with the standard documentation. Based on the material organization of the primary account annually to the statistical reports on jobs, the results of their assessment and rationalization on forms approved by the decision of the National Statistics Committee of Belarus.

## **CERTIFICATION WORKPLACES**

Certification of workplaces - comprehensive assessment of the workplace in accordance with regulatory requirements, innovative solutions and advanced scientific technologies to improve productivity and the quality of maintenance and repair of machinery and equipment on farms.

When determining whether a workplace uses state standards, sanitary regulations, standards process documentation, project of works, standard documents, a description of the organization of work, description of work processes, standards of enterprises, sets technology.

Certification of workplaces by the following levels:

technological;

organizational;

working conditions and safety.

Productivity and quality of the maintenance and repair of machinery and equipment of livestock farms are calculated to assess the efficiency of the workplace. Assessment of the technical level of the working places is taken of the following factors (Kt)

performance of the equipment (Kt1)

requirements for the quality of work for the equipment (operations) (Kt<sub>2</sub>)

advanced processes and the use of technological capabilities of the hardware

(Kt<sub>3</sub>);

technological equipment data sets mechanization, equipment, fixtures, equipment, motorized, manual and measuring instrument (Kt<sub>4</sub>);

availability of mobile equipment (Kt<sub>5</sub>).

In assessing the performance of the equipment is taken into account:

match the actual performance data of the equipment , or this would not be taken into account in connection with the production and technological need of this type of equipment ( $Kt_1$ ).

In assessing the suitability of equipment requirements for the quality of work (operations), take into account:

opportunity to provide passport the actual condition of the equipment requirements for the quality you performs maintenance and repair of livestock equipment.

In assessing advanced processes and the use of hardware features taken into account:

line equipment operation modes regime provided for in process documentation.

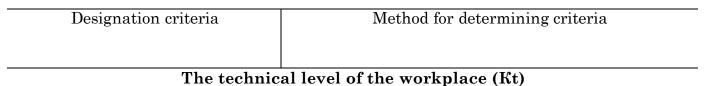
In assessing the level of technological equipment of the workplace accounted for the presence in the workplace throughout the tooling provided for the process.

In assessing the level of availability of lifting and mobile equipment accounted availability and completeness of lifting and mobile equipment.

Assessment of the workplace in the technical level is determined by the following formula:

$$Kt = \frac{Kt_{1} + Kt_{2} + Kt_{3} + Kt_{4} + Kt_{5}}{5}$$
(1)

#### Defining criteria workplace



#### **1.** Performance of the equipment(Kt<sub>1</sub>)

Compliance with the actual  $K = \frac{Pf}{Pc}$ , (2) equipment performance nameplate K – compliance rate of the actual equipment data (or calculated data) performance calculation (passport); (passport).

Pf – the actual performance of the equipment;

Pc – performance of the equipment for the calculation

If  $K \ge 1$  then accepted Kt<sub>1</sub>=1;

If  $K \ge 0.75$  then accepted Kt<sub>1</sub>=0.5;

If K< 0.75 then accepted Kt<sub>1</sub>=0.

## 2. The equipment complies with the requirements for the quality of work (Kt<sub>2</sub>)

Ability to ensure, according to the Techn passport data of the actual the re equipment and hardware equip requirements for the quality of In cas work

Technical requirements for work performed meets all the requirements established in the workplace equipment - "1". In case of non - "0".

# 3. Progressive technological processes and the use of technological capabilities of the hardware (Kt<sub>3</sub>)

Compliance with equipment	If there is a match modes of equipment regimes
operation modes regime provided	provided by of technological process - "1".
for in technological documentation	If inconsistent modes of equipment regimes provided
	by of technological process, but maintaining the level
	of consumption of materials and spare parts,
	productivity, quality of work - "0.5".
	If inconsistent modes of equipment regimes provided
	by of technological process, the deteriorating quality
	of the work and an increase in the consumption of
	materials and spare parts - a "0".

## 4. Technological equipping the workplace (Kt<sub>4</sub>)

Presence in the workplace	Provided the equipment has been fully staffed in
throughout the tooling provide	accordance with the documentation provided by of
documentation that provides the	technological process - "1".
required quality of work	Provided the equipment is not equipped with - "0."

## 5. The presence the lifting and mobile vehicles ( $Kt_5$ )

Availability and condition the	In the presence of up-and-equipped vehicles - "1".
lifting and transport	In the presence of up-and-vehicles, manned by more
	than 70% - "0.5".
	In the presence of up-and-vehicles, manned by at
	least 70% - "0".

In assessing the organizational level job included the following key indicators (Ko):

proper design job with regulatory and technical documentation (Ko<sub>1</sub>)

organizational workplace equipment and the availability of related services, regulatory and technical documentation (flow charts, maps, work organization, etc.), work plans brigade outfits (Ko<sub>2</sub>);

use of advanced forms of work organization in the workplace: the use of the brigade form of organization and motivation, rationality service job (Ko<sub>3</sub>)

compliance costs progressive labor standards regulations (Ko<sub>4</sub>);

utilization of workplace (Ko<sub>5</sub>).

In assessing the rationality of planning workplace considered proper design workplace standard project work organization.

In assessing the workplace for all equipment provided for a typical project organization of labor, and its technical condition.

In assessing the use of advanced forms of work are taken into account:

application forms brigade labour organization and its rationality (whether brigade complex, cross-cutting, running on a single outfit, distributed a total earnings at a rate of labor force participation, etc.) (Ko<sub>3.1</sub>) combining trades (Ko<sub>3.2</sub>):

$$Ko_{3} = \frac{Ko_{3,1} + Ko_{3,2}}{2}$$
(3)

Similarly defined, and other items index as arithmetic mean, where evaluation is performed on two or more criteria.

In assessing compliance with the norms of labor costs progressive standards take into account:

presence in the workplace norms of time and that their model rules;

match the actual output quotas calculated (design).

In assessing the use of the workplace accounted for hardware utilization and employment in the workplace during the shift.

Assessment of the workplace is defined by organizational levelby the formula:

$$Ko = \frac{Ko_{1} + Ko_{2} + Ko_{3} + Ko_{4} + Ko_{5}}{5}$$
(4)

### Defining criteria workplace

Designation criteria	Method for determining criteria
----------------------	---------------------------------

## Organizational level of the workplace (Ko)

## 1. Rational layout jobs (Ko1)

Proper design workplace standard	If the plan meets the standard design organization of
project organization of labor	labor - "1".
	Provided that the plan is irrational, but can be
	brought up to standard project - "0.5".
	Provided that the plan is irrational and can not
	change it - "0".

## 2. Organizational equipping jobs (Ko<sub>2</sub>)

Presence in the workplace	If available in the workplace all organizational
organizational equipment	equipment, specifications and technical
normative and technical	documentation provided for a typical project
documentation provided typical	organization of labor - "1".
project work organization	With insufficient organizational equipment, but that
	can be remedied or repaired, and the workplace can
	be brought up to standard project - "0.5".
	In the complete absence in the workplace any
	organizational equipment and technical
	documentation - "0".

## 3. The use of advanced forms of work organization in the workplace (Ko<sub>3</sub>)

Use brigade forms of work	Provided that the workers working in the same place,
organization*	is a member of the team and his salary is determined
	with reference to the labor participation coefficient
	and pay for a single outfit - "1".
	Provided that the workplace of the operating team,
	but the salary is determined without regard to the

62	Journal of Studies in Social Sciences
	working of the labor participation coefficient - "0.5".
	If the job is not served by a brigade, and opportunities
	exist for this - "0".
combination of professions*	In the presence of combination professions - "1".
	If there is no combination of professions, but with the
	possibility of combining professions - "0".

## 4. Compliance with the rules of labor costs with advanced standards (Ko<sub>4</sub>)

Availability in the workplace	If there are rules, designed in accordance with
norms of time and compliance of	standard and on the other, more progressive
their of model rules	standards - "1".
	In the absence of standards or their inconsistency -
	"0."
Conformity the actual output	If there is a match the actual output norms
norms with the calculated norm	up to 120% - "1";
	up to 140% - "0.5";
	more than 140% - "0";

## 5. Extent of use workplace (Ko<sub>5</sub>)

Extent of hardware utilization\*\*

$$Ke = \frac{Tc}{Tf}, (5)$$

Ke – equipment load factor; Tc – total complexity of work performed on this equipment, man-hours; Tf – fund of working time of equipment, hours; If Ke> 0,8 then accepted Ke=1; if 0,8 >Ke  $\geq$  0,7 then accepted Ke=0.5; if Ke < 0,7 then accepted Ke=0.

Employment of workers in the workplace during the shift

$$Ks = \frac{Tm}{To}, (6)$$

Ks – load factor of working during the shift;

Tm – total employment of workers during a shift considering trips and movement, hours; To– operating hours, hours. If Ks $\geq$  0,7 then accepted Ke=1; if 0,7 >Ks  $\geq$  0, then accepted Ke=0.5; if Ks< 0,5 then accepted Ke=0.

#### Notes:

\* Takes into account the capabilities of the brigade form of labor organization or a combination of professions.

\*\* Taken into account for machinery and equipment in the main production lines.

When assessing conditions and safety in the workplace accounted for the following key indicators (Ky):

line of household and hygiene regulations (Ky1);

use of heavy physical labor (Ky<sub>2</sub>);

security and compliance with safety standards of individual and collective protection (Ky<sub>3</sub>);

providing workers with special clothes and special shoes in accordance with established standards (Ky<sub>4</sub>).

In assessing compliance with sanitation and hygiene regulations are taken into account:

appropriate concentrations of hazardous substances in workplace air regulations;

appropriate temperature and relative humidity with regulatory requirements; compliance performance parameters of lighting in the workplace regulations.

In assessing compliance with the use of heavy physical labor is taken into account compliance with the conditions of exercise equal to or below acceptable standards.

In assessing the security and compliance of safety standards of individual and collective means of protection are considered:

presence in the workplace, relief funds, signaling danger;

personal protective equipment;

electrical safety, fire and explosion, depending on the specifics of equipment and conditions of use.

In assessing the state of security of workers clothing and special footwear in accordance with established standards taken into account:

the quantity and range of clothing and footwear to the established norms.

Assessment of the workplace in terms of working conditions and safety is given by:

$$Ky = \frac{Ky_{1} + Ky_{2} + Ky_{3} + Ky_{4}}{4}$$
(7)

Defining criteria workplace

Designation criteria	Method for determining criteria
Working conditions and safety in the workplace (Ky)	
1. Compliance with sanitation and hygiene in the workplace regulatory	
requirements (Ky1)	
Appropriate concentrations of	Concentration of harmful substances in the air of
hazardous substances in	the working area meets the requirements of State
workplace air regulatory	Standard 12.1.005-76 section "Workplace air.
requirements	Sanitary requirements ",
	Health standards, rules and hygienic standards
	13-2-2007 "Hygienic classification of working
	conditions", approved by the Ministry of Health of
	the Republic of Belarus of December 20,
	2007 № 176 " 1";
	In case of noncompliance regulatory requirements -
	"0."
Appropriate temperature and	In full compliance of temperature and relative
relative humidity regulatory	humidity of standard indicators - "1";
requirements	In case of partial inconsistency - "0.5";
	When complete mismatch - "0."

D

Compliance with performance	If there is a match according to the parameters of
parameters of lighting in the	industrial lighting health standards and rules
workplace regulatory	№11-4-79 - "1";
requirements	In case of noncompliance regulatory requirements -
	"0."

### 2. The use of heavy physical labor (Ky<sub>2</sub>)

Compliance with the conditions physical exertion of admissible norms Provided that the physical load is not more than acceptable standards (Regulations on the procedure for certification of workplaces on working conditions, approved by the Council of Ministers on February 22, 2008 № 253) - "1". Provided that the physical load above acceptable

norms - "0".

## 3. Secured and compliance with labor standards of individual and collective protection ( $Ky_3$ )

The presence in the workplace of	Provided complete isolation workplace with high
barrier and warning devices,	danger of labor from other workplaces that are
signaling danger	common passages and crossings, subject to necessary
	warning devices when working with high danger - "1".
	In the absence of barrier and safety devices - "0."
The presence of personal	When fully provided with personal protective
protective equipment	equipment - "1."
	In the absence of at least one unit personal protective
	equipment - "0."
Electrical safety, fire and	When using funds provided by the rules of the State
explosion, depending on the	Energy Supervision Service, State standards
specifics of the equipment and	12.2.007.75 - 12.2.007.14-75; State Standard 12.1.010-
service conditions	76, State Standard 12.007-76, ensuring electrical

safety, fire and explosion, depending on the specific characteristics of the equipment and the conditions of its operation - "1".

In case of noncompliance with regulations - "0".

## 4. Condition provision of workers with special clothes and special shoes in accordance with the rules and regulations (Ky<sub>4</sub>)

Condition provision of workers	When there is of stock in accordance with of special
with special clothes and special	clothing and special shoes, its use in the process labor
shoes in accordance with the rules	and qualitative condition (lack is allowed not more
and regulations	than one a minor title for clothing) - "1".
	In the absence of clothing and special shoes in
	accordance with established standards and condition
	(at the conclusion of Certification Commission) - "0".

Assessment of the workplace on the technical, organizational level and the level of working conditions and safety characterize the actual state of the workplace (Ktotal) and is defined as the arithmetic average of three factors as follows:

$$Ktotal = \frac{Kt + Ko + Ky}{3}$$
(8)

According to the results of certification each job falls into one of three groups:

certified - jobs, results of which fully meet the requirements in their evaluation or above;

be rationalization - jobs, some indicators that do not meet the requirements, but they can be brought into line with these requirements in the rationalization process;

subject to liquidation - jobs, figures which do not meet the requirements and can not be brought down to their level as a result of rationalization.

The workplace is considered qualified if his overall assessment is not lower than the value of 0.75, and the number of indicators that do not meet the regulatory requirements for each level does not exceed unity. For each non-Qualified workplace conducted a feasibility analysis of a job with the development of solutions to reduce, rationalize, continued operation of the workplace, and identifying trends, assess the feasibility and timing of rationalization.

Workplace with the value of (Ktotal) equal to 0.5-0.75, be rationalized.

If a job with the value of (Ktotal) is less than 0.5, it is not qualified and subject to liquidation. It is necessary to transfer certain operations (work) to one of the certified job.

The results of job evaluation and suggestions for streamlining the map are reflected in the certification, signed by the members of the Commission, certifies, and the workers employed in these studies.

### **RATIONALIZATION WORKPLACES**

Rationalization of jobs is a complex of organizational and technical measures to improve employment and improving their use.

Upon completion of job evaluation in the organization conducted a feasibility study, in which:

The results of job evaluation and suggestions for improvement;

calculated the effect of bringing jobs to the standard level and the necessary costs;

identifies technical, material and financial resources for the rationalization of jobs.

After the analysis is determined by:

main trends of the maintenance and repair of livestock equipment, the volume and timing of the implementation of measures to rationalize the number of unnecessary jobs and terms of liquidation, the number of jobs to be rationalization, the number of workers that require advanced training, as well as exempt employees and their possible further use.

Measures to streamline the jobs are being developed under the leadership of Chief Engineer District Agricultural Service.

Responsibility for the development of a plan of organizational and technical measures rests with the Chief Engineer District Agricultural Service. Plan is developed based on analysis of assessment results and proposals of the workers, engineers and public organizations and approved by the director of the Regional Agricultural Service.

Term development and approval of the action plan - two months after the job evaluation. Changes in the plan of organizational and technical measures are included in the prescribed manner. The event will be executed only after the act of its implementation.

A summary of the survey results, evaluation and rationalization of jobs in the established order is sent by a higher organization.

Cost-effectiveness of individual activities, depending on their contents are made as follows:

for events to raise the technical level - according to the method of determination of economic efficiency in the economy of the new technology, inventions and innovations (basic provisions), subject to additions and clarifications contained in industry standard 102.18-2011 "Methods for the economic evaluation and procedure definition of indicators ", approved by the Ministry of Agriculture and food of the Republic of Belarus of 17.11.2008 No 524;

When elimination of jobs, the economic effect is determined by taking into account the residual value of the equipment. When freed from the equipment operations are transferred to the more advanced equipment, calculated additive effect derived from the reduction of production costs, as the introduction of new equipment.

When replacing jobs in new effect is determined as well as on measures to improve the technical level, taking into account the residual value of the equipment released.

#### PLANNING WORKPLACES

The main tasks of planning jobs at service stations are consistent optimization of the number of jobs, the achievement and ongoing maintenance of balance of jobs and workers maintenance and repair of machines and equipment in animal husbandry. Determination of the number of jobs scheduled for service stations service the agricultural district and farms is based on the planned scope of work, tasks for increased productivity.

Scheduled jobs services for the maintenance and repair of livestock equipment (Mpl) is given by:

$$Mpl = \frac{P}{B * K} = \frac{Q * P}{Pyear * I * K},$$
(9)

P - the amount of work in the planning period, USD;

B - the actual output per worker in the year, USD;

K - actual factor manning jobs workers in the reporting year;

Q - the actual number of employees during the year, people;

P year - the amount of work that is performed by our own efforts during the year, USD;

I- index of growth labor productivity.

Conformity between the number of jobs and workers to evaluate the degree of balance of jobs and workers.

The degree of balance of jobs and workers on the plan or in fact - is the ratio of the planned or actual number of employees to project the number of employees required to staff all the jobs with standard staffing ratio (workers - according to the project of works, including maps, charts work processes).

The degree of balance (Kb) of jobs and workers in the services of maintenance and repair of machinery and equipment is determined by the formula:

$$\operatorname{Kcb} = \frac{Qt}{Qp} = \frac{Qt}{Mt * Kn}, \qquad (10)$$

Qt – total number of employees;

Qp- project number of employees of;

Mt- the overall average for the year, the number of jobs;

Kn – normative coefficient manning jobs workers.

Normative factor manning jobs workers determined the number of employees to be carried by one individual at a workplace standard (project) shift index work on different machines, tools and equipment. When the calculation of consolidated regulatory factor manning jobs employees determined by the product of the actual manning ratio of jobs to the index growth of the coefficient shift index workers, work vehicles, machinery, equipment or other similar indicator to the standard level.

The index growth of the coefficient the working shift index, the work of machines, equipment or other similar indicator to the standard level determined by the ratio of its standard (project) values to the level of the year.

Number of jobs in liquidation (Mb) in the planning period is calculated as:

$$Mb = Ms + Mi - Mt, \qquad (11)$$

Ms- total number of jobs before the planning period, determined from the results of accounting;

Mi - entry jobs in the planning period the average annualized basis;

Mt- total annual average number of jobs in the plan period;

The amount of the jobs in the planning period is determined by the creation of new jobs and the need to replace inefficient jobs and tasks to improve the working and living conditions of workers.

Number of input and leaving jobs is determined by the balance of the development of jobs in the following areas: technical re-equipment and reconstruction, including organizational and technical measures, changes in the structure and scope of work for the maintenance and repair of machines and equipment for livestock facilities.

Balance of jobs developed simultaneously with the plan for economic and social development of the organization as an integral part.

Balance sheets scheduled jobs are developed together with other plans introduction of new technology jobs to implement scientific management, plans reproduction active fixed assets. The five-year development plan focuses on balancing jobs through modernization, including organizational and technical measures. Modernization plans together with other materials based on the results of evaluation.

## ACTIVITIES AND STEPS FOR CERTIFICATION, RATIONALIZATION, PLANNING AND ACCOUNTING FOR THE WORKPLACES

Organizational and methodological work begins with preparatory activities, including the publication of the order, which approves the composition of evaluation committees shall be governed by the order and timing of assessment.

Responsible for the work on certification, rationalization, planning and accounting jobs appointed chief engineer of the district agricultural service. This work includes all the functional and structural units that achieve the appropriate indicators to improve employment. The distribution of responsibilities between them produces the chief engineer. Industrial Engineering Department and Planning Department perform major work on certification and rationalization of jobs.

During the organizational and methodological work in conjunction with the administration of the trade union committee provides:

attended of advanced production workers, engineers, innovators and inventors. In job evaluation necessarily involves workers employed in them;

inclusion of measures to streamline jobs in the relevant sections of the annual and five-year plans for economic and social development programs to improve the scientific and technological level of production, as well as collective agreements;

study of the problems and methods of certification and rationalization of jobs, transfer of best practices and methods of work, the system of economic education, training and skills development in the workplace;

establishment of creative teams to develop measures to streamline job to turn this work into personal creative plans employees.

Work on coordination, organizational and methodological guidance for certification, rationalization and accounting jobs, oversee its implementation, as well as the study and dissemination of best practices by the standing Attestation Commission.

The committee includes the heads or representatives of the Planning Department and industrial engineering department, senior engineer for the protection, safety at work, setters, representatives of the trade union organization, the advanced workers. Committee headed by the chief engineer of the district agricultural service.

The main tasks of the evaluation commission are:

organization and implementation of accounting jobs;

preparation of the necessary regulatory, technological and other documentation for the certification of employment;

comparison of the actual values of parameters describing the technical and organizational levels of employment, working conditions and safety regulations and the definition of a comprehensive assessment of the workplace;

a feasibility analysis of the characteristics of the workplace, the development of organizational and technical measures to improve the efficiency of their use, as well as monitoring the progress of activities;

develop proposals to plan training of workers;

compiling a summary report on the results of evaluation, rationalization and accounting jobs;

Preparation of the draft order as a result of certification;

preparation of proposals for the promotion of workers for their active participation in the certification;

direction of certification results in a higher organization.

During the job evaluation and development of measures to rationalize their use findings and orders of the State Technical Supervision, fire inspections, technical labor inspectors, research materials of sanitary supervision.

Results of assessment are discussed at meetings of labor collectives and with their proposals published by the trade union committee agreed order, which is determined by:

overall performance evaluation, rationalization and accounting jobs;

measures to rationalize with specifying of responsible persons for their implementation;

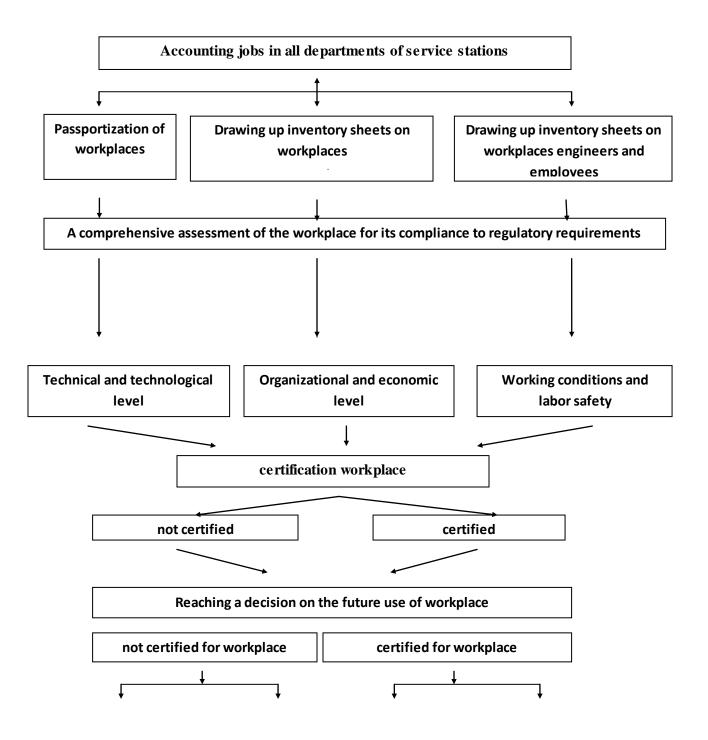
measures for the retraining of workers and the use of which would be released in connection with the liquidation and rationalization of jobs;

measures of moral and material incentives for workers for their active participation in the work done.

Material incentives for workers to develop and implement organizational and technical measures to streamline jobs based on appraisals, reducing inefficient jobs and absolute release of the number of employees in accordance with current regulations on bonuses for the creation and implementation of new technology.

can be developed specific provisions for bonuses of employees of the material incentive fund.

Organization of work for certification, rationalization and accounting employment shown in Fig.



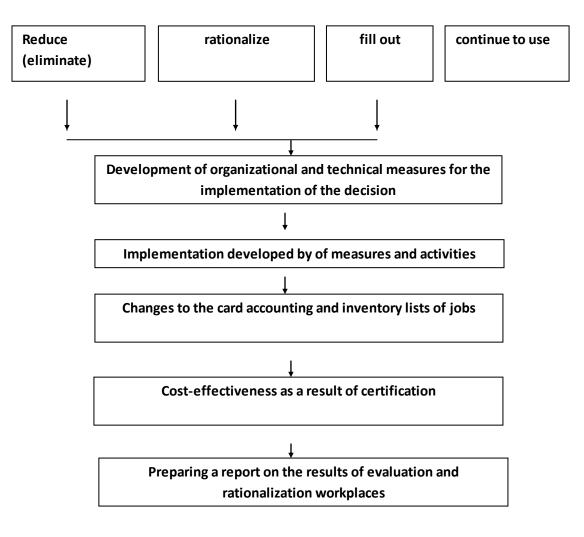


Fig. The scheme of work of comprehensive workplace certification

## EVALUATION OF ECONOMIC EFFICIENCY FROM THE RESULTS OF CERTIFICATION WORKPLACES

As a result of certification, other things being equal, in the first place should be reduced number of unnecessary and inefficient jobs at service stations. Reduction and rationalization of jobs at service stations to further improve productivity. Calculations show that the presence of excessive and inefficient jobs at service stations and industrial engineering department farms leads to an overestimation of the assets, while reducing the level of productivity and ultimately reduces the effectiveness of the workplace.

Efficiency calculation of each workplace offers to produce by using the integral indicators as follows:

$$E = \frac{R}{C},$$
 (12)

E – effectiveness of individual workplaces;

- R results in the workplace (manufacture of products), USD;
- C cost of workplace, USD.

#### Conclusion

Research conducted by 27(listed above) regional agricultural base repair and service enterprises of Belarus showed: the organization of labor in terms of complexity and scientific approaches to their solution to domestic enterprises agro-industrial complex of today is not given due attention.

In developing these recommendations was used the best practices in occupational safety, organization and technology maintenance repair livestock equipment, experience scientific research and of technical repair companies of the Republic of Belarus, Russia and other CIS countries.

The use of this methodology to agricultural enterprises will undoubtedly increase the efficiency of production and labor potential.

In this paper we define the procedure, particularly the principles and mechanisms of accounting, evaluation and rationalization workplaces and serve as a methodological basis for organizing of such work on agricultural enterprises.

#### References

Kovalev, L. I. Organizational and technological bases of maintenance and repair of machines in dairy farming, Minsk: Belarusian State Agrarian Technical University, 2012, 224 p. (Russian). – ISBN 978-985-519-530-7.

Kovalev, L. and Kovalev, I. (2012) The social and economic importance of certification and rationalization of employment service enterprises of agro-industrial complex. (*RJOAS*) Russian Journal of Agricultural and Socio-Economic Sciences, 7(7), pp. 3-12. (Russian). – ISSN 2226-1184.

Kovalev, L. and Kovalev, I. (2013).Cost-effectiveness of rationalization and certification of working places in cattle breeding, Journal of Agriculture and Sustainability, Volume 2, Number 2, IinfinityPress, Edgecliff NSW, Australia, pp. 160-177. – ISSN 2201-4357.