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## THE NEED TO COMPLY WITH FIRE PROTECTION AT AGRICULTURAL FACILITIES IN RUSSIA

Arifullin, Evgeny Zaudyatovich<sup>1</sup>, Ovchinnikova, Tatyana Valentinovna<sup>2</sup>

<sup>1</sup>Candidate of Technical Sciences, Associate Professor, Voronezh State Technical University, 84, 20-letiya Oktyabrya Street, Voronezh, Russia, E-mail: arif-vrn@mail.ru

<sup>2</sup>Candidate of Biological Sciences, Associate Professor, Voronezh State Technical University, 84, 20-letiya Oktyabrya Street, Voronezh, Russia, E-mail: tvo0104@mail.ru

### Abstract

The article discusses the need to comply with fire regulations in the agricultural complex of Russia. Ensuring the food security of our country is impossible without the implementation of comprehensive fire prevention measures at all facilities of the agricultural sector, as well as at all stages of planting, growing, harvesting grain, fodder crops, keeping meat and dairy cattle, fur animals. But maintaining a fire regime inside capital / temporary construction projects, in territories, including fields, adjacent forests, steppes, is a legally approved duty of managers responsible for fire safety.

**Keywords:** agriculture, history, land, forest land, water.

### I. INTRODUCTION

An analysis of past years shows that livestock buildings are the most vulnerable in terms of fire among agricultural facilities. Even in the initial stage of a fire, slight smoke already leads to the death of animals that are extremely sensitive to smoke. Most of the fires in such premises occur due to violations of fire safety rules during installation and operation of heat-conducting installations, electrical heating systems for animals, when heating defrosted heating systems with an open fire. In the cold season, farms strive to improve the organization of animal feeding. Crushers and steamers and water heaters are widely used for this purpose. It is important to ensure that all of them are in good condition, and especially their electrical equipment. All lighting and power wiring, as well as protection devices, must be designed for the power consumption of electrical receivers, have proper protection and reliable grounding. As for electric lamps, in order to prevent fire, they must be enclosed in protective glass shades, and junction boxes are equipped with lids. It is worth remembering that only persons who have passed the fire-technical minimum and have a special certificate are allowed to work on maintenance of heat generators, feed preparation units and other fire hazardous installations. Insulation of farms is also an important economic issue. When solving it, it is necessary to take special precautions: repair heating devices in time, do not fill up the exits from the premises with straw with the onset of cold weather, leave escape routes free, and do not store food supplies in the attics of outbuildings, where electrical wiring is often laid and furnace chimneys pass.



In rooms with stove heating, it is necessary to pay attention to the implementation of fire safety requirements both during the installation of stoves and during their operation. Fires most often occur as a result of overheating of stoves, the appearance of cracks in the brickwork, as a result of the use of combustible and flammable liquids for kindling, falling out of burning coals from the furnace or ash pan. For durable and safe operation of stove heating, the following requirements should be remembered: stoves and other heating appliances must have fire-prevention cuts (retreats) from combustible structures, as well as a pre-furnace sheet measuring 0.5 x 0.7 m. on wooden or other combustible floors. Fires most often occur when stoves are left unattended during firing. In severe frosts, furnaces are often heated for a long time, as a result of which the individual parts of the furnace are overheated. If these parts are in contact with wooden walls or furniture, then a fire is inevitable. Therefore, it is recommended to heat the stove 2-3 times a day for 1-1.5 hours, rather than once for a long time. It is forbidden to store combustible property or materials near stoves and directly on their surface, to dry any laundry.

## II. METHODOLOGY AND RESULTS

The methodological and informational basis of the article is the legal documents of the Russian Federation on the technical operation of electrical installations and fire safety, statistical collections of the State Statistics Committee of the Russian Federation, materials of scientific conferences, articles in scientific collections and periodicals on the problem under study. Methods of mathematical modeling, system analysis, probability theory and mathematical statistics are used.

In accordance with the Decrees of the Government of the Russian Federation of November 10, 2015 No. 1213 "On Amendments to the Rules of the Fire Regime in the Russian Federation" (hereinafter referred to as the Rules) and of March 21, 2017 No. 316 "On Amendments to Clause 218 of the Fire regime in the Russian Federation" it is prohibited to burn dry herbaceous vegetation, stubble, crop residues (with the exception of rice straw) on agricultural lands and reserve lands, and make fires in the fields.

In order to ensure fire safety during the preparation and conduct of seasonal field work, at agricultural facilities, we recommend that heads of agricultural organizations of all forms of ownership inspect the fire condition of industrial storage sites for roughage, parking areas for agricultural machinery, livestock buildings and adjacent territories, fuel depots -lubricants and other production facilities. Primary fire extinguishing equipment should be placed in production premises, fire containers with water should be located in the territories, we recommend appointing responsible persons for the state of fire safety. As necessary, carry out work to renew the mineralized strips, provide for protection against forest fires of the equipment available on the farms, production facilities, livestock and poultry.

When carrying out seasonal field work, we recommend that farm managers take personal control of compliance with the requirements of the Rules for preventing the burning of dry grassy vegetation, straw and stubble of agricultural crops on agricultural land, and not to operate agricultural machinery and equipment that violate fire safety requirements. It is necessary to instruct your employees on their compliance with fire safety measures.

The organization of fire protection in rural areas is entrusted to local governments. In order to fulfill the tasks assigned to the fire department, these bodies establish mandatory deductions in the amount of 0.5% of the total estimated cost of construction, overhaul, reconstruction of facilities, expansion, technical re-equipment of enterprises, buildings, structures and other facilities, with the exception of works financed by account of local budgets. To involve employees of enterprises in the work of preventing and fighting fires at facilities, fire-technical commissions (PTK) and voluntary fire brigades (VFD) can be created. The PTK usually includes one of the managers of the enterprise, chief specialists, heads of primary production units, an engineer for labor protection and the head of the DPD.



The main task of the commission is to identify shortcomings and violations of the Fire Safety Rules in the operation of buildings and structures, the implementation of technological processes, the operation of machinery and equipment. The Fire and Technical Commission at least once a quarter inspects all production facilities of the enterprise and takes appropriate measures to eliminate the identified deficiencies. on the farm, etc.). The composition of the DPD is drawn up by order of the enterprise. Members of the DPD are provided with social guarantees established by the state authorities of the Russian Federation, local governments, as well as by the enterprise that created the voluntary squad. The organization of fire fighting in rural areas is very difficult, since it is here that the largest number of fires occur, the necessary fire-fighting water supply is not always available, and it is not always possible to quickly deliver fire trucks to the scene. The situation with the organization of communications and the condition of roads in the autumn-winter period of the year is unfavorable. Therefore, special attention should be paid to the preparation of settlements to extinguish fires, the development of appropriate operational documents.





In addition to the officials of the State Fire Service, the head of the district administration, the deputy head of the administration in charge of fire safety issues of the district, the head of the city (rai) of the Department of Internal Affairs are responsible for the development and implementation of fire safety measures for settlements.

The Fire Safety Commission is developing a targeted program for the organization of fire prevention and extinguishing, which includes:

1. general provisions;
2. measures to organize fire prevention;
3. organization of fire extinguishing;
4. financial and logistical support of the fire department;
5. social protection of fire protection personnel.

In the territorial fire departments, a list of fire extinguishing plans and cards is being developed:

1. fire extinguishing plans for facilities;
2. fire extinguishing cards for settlements;
3. fire extinguishing cards for settlements;
4. fire extinguishing cards for suburban areas.

An agreement is also concluded for the elimination of fires with the following services of the district:

1. plumbing and communal;
2. forestry;
3. ambulance;
4. power supply;
5. gas facilities.

Any extinguishing of a fire in a village can be aggravated by an unfavorable set of circumstances. In the warm season - high temperature, wind, drought. In winter - frost, lack of unfrozen water in reservoirs, and, finally, connections with the city. It is worth noting that the waiting period for help in the villages is from half an hour. Rescuers who arrived at the scene are forced to work with buildings that have already flared up. No fire brigade has yet been able to bring down the hot flames with a single tank. Therefore, villagers have to fight the fire with improvised means, sometimes this is the only way to save property. In economically developed territories with agricultural enterprises, help is expected from freelancers, although, as a rule, municipalities take care of maintaining their own fire department. In general, the rural population is sufficiently taught by life to "play with fire."

Any head of an organization is obliged to conduct fire-fighting briefings with persons involved in harvesting, to provide harvesting units and vehicles with primary fire extinguishing equipment (combines of all types and tractors - 2 fire extinguishers, 2 bayonet shovels) and serviceable spark arresters, except for cases when an exhaust gas aftertreatment system is used.

Temporary field mills must be located no closer than 100 meters from grain arrays, currents, etc. The sites of field mills and grain streams must be plowed with a strip of at least 4 meters wide. In the field, storage and refueling of vehicles, other machinery and technological equipment with oil products is carried out on special sites cleared of dry grass, combustible debris and plowed with a strip of at least 4 meters wide, or on plowing at a distance of 100 meters from currents, haystacks and straw, grain arrays and other agricultural crops and at least 50 meters from buildings.





It is forbidden to sow spiked crops within the boundaries of the right-of-way and protected zones of railways, as well as within the boundaries of the right-of-way of roads. Mows of grass cut on these strips must be placed at a distance of at least 30 meters from the grain arrays. Before the ripening of cereal crops, grain fields in places where they adjoin forest and peat tracts, the steppe zone, roads and railways must be mowed and plowed over with a strip of at least 4 meters wide.

Grain harvesting begins with the breakdown of grain arrays into plots of no more than 50 hectares. Between the plots, swaths are made with a width of at least 8 meters. Mowed cereals from the swaths are immediately removed. In the middle of the swaths, a plowing is made at least 4 meters wide.

When harvesting grain arrays with an area of more than 25 hectares, a tractor with a plow must be in constant readiness for plowing the burning zone in case of fire.

### III. CONCLUSION

The practice of fighting fires has shown that the use of primary fire extinguishing agents is very effective. They are designed to eliminate starting fires by the personnel who discovered the fire. The most suitable for use in industrial premises are the following primary fire extinguishing agents:

carbon dioxide (OU - 2, OU - 5, OU - 8) and powder (OP - 10, OP - 1); fire shields equipped with a chance tool (hook, pickaxe, shovel); sand boxes.

To detect sources of ignition in the premises, it is necessary to install fire safety systems.

The evacuation of people and equipment from buildings is carried out through evacuation exits, corridors, doors, landings, stairs, separated from adjacent rooms by fire partitions, as well as providing good access to them from working premises, balconies, loggias, galleries, elevators.

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## НЕОБХОДИМОСТЬ СОБЛЮДЕНИЯ ПРОТИВОПОЖАРНОЙ ЗАЩИТЫ НА СЕЛЬСКОХОЗЯЙСТВЕННЫХ ОБЪЕКТАХ В РОССИИ

Арифуллин Евгений Заудятович<sup>1</sup>, Овчинникова Татьяна Валентиновна<sup>2</sup>

<sup>1</sup>Кандидат технических наук, доцент, Воронежский государственный технический университет, ул. 20-летия Октября 84, Воронеж, Россия, E-mail: arif-vrn@mail.ru

<sup>2</sup>Кандидат биологических наук, доцент, Воронежский государственный технический университет, ул. 20-летия Октября 84, Воронеж, Россия, E-mail: tvo0104@mail.ru

### Аннотация

В статье рассматривается необходимость соблюдения противопожарных норм в агропромышленном комплексе России. Обеспечение продовольственной безопасности нашей страны невозможно без осуществления комплексных противопожарных мер на всех объектах аграрного сектора, а также на всех этапах посадки, выращивания, уборки зерновых, кормовых культур, содержания мясомолочного скота, пушных зверей. Но поддержание противопожарного режима внутри объектов капитального/временного строительства, на территориях, включая поля, прилегающие леса, степи, является законодательно утвержденной обязанностью руководителей, ответственных за пожарную безопасность.

**Ключевые слова:** сельское хозяйство, история, земля, лесные угодья, вода.

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