It should to be noted, that this Monograph, practically, is the first systematic complex study of the functional state age dynamics at the soccer players' central nervous and the neuromuscular systems, at the age from 9 (e.g. 108 months) up to 35 years (e.g. 420 months), which was permitted to be received a number of the absolutely new scientific facts and data. Firstly, it has been established, that the CNS inhibitory processes and the skeletal muscles relaxation rate are made considerably greater contribution to the progress of the soccer players' sports results, in comparison with the excitatory processes, their maximum force, and the muscles contraction rate. Firstly, it has been proved, that all the parameters, having reflected the anthropometric status, the central nervous and the neuromuscular systems state, the long – term adaptation types, the injuries and traumas appearance probability and the power of the protection physiological mechanisms, have their characteristic age dynamics, which is divided into three main types. First experimental evidence has been proven, that the age of 14–16 years is the most critical for the young soccer players, and it, moreover, is required the special methods development of the sports training at this age.

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LEVEL SL-SELECTIN IN BLOOD SERUM OF PATIENTS WITH SCHIZOPHRENIA COMORBIDITY PYODERMA

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Pyoderma is one of the most common infectious dermatoses with a frequency of occurrence in the general structure of the skin disease to 43 % and 17,3 % for patients with mental health [2, 3]. Immunological disorders are one of the contributing factors to the development of pyoderma, including comorbid with schizophrenia [1, 2]. In this regard, the need for more in-depth study of disorders of the immune system in these patients is important.

Objective. Study the level of sL-selectin in the serum of patients with pyoderma comorbid schizophrenia.

Methods. Clinical and immunological study was performed in 40 patients with pyoderma comorbid with schizophrenia at the age of 18 to 70 years. To measure the level of human sL-selectin (leukocyte adhesion molecule-1) in human serum was used immunoassay method using horseradish peroxidase as the indicator enzyme (Bender MedSystems, Austria).

Results. Immunosorbent assay showed that the concentration of sL-selectin were significantly increased in patients with comorbid schizophrenia pyoderma, $p < 0,001$. In patients with schizophrenia without pyoderma sL-selectin levels were significantly increased compared with the parameters of healthy and 9,3 % was lower than in patients with comorbid schizophrenia pyoderma ($1569,0 \pm 120,7$, $1423 \pm 126,2$ ng/ml, in patients with pyoderma comorbid schizophrenia and schizophrenia without pyoderma, respectively, $907,0 \pm 148,3$ ng/ml in healthy). The rise of sL-selectin may be a consequence of activation of neutrophils, which causes an increase in the number of adhesion molecules, and confirms that a compromised immune system are involved in the pathogenesis of schizophrenia, and pyoderma.

Conclusions. The results showed that elevated levels of sL-selectin detected in patients with comorbid schizophrenia pyoderma is a risk factor for the development of pyoderma and can be used as a criterion to judge violations of the immune system and to evaluate the effectiveness of therapy in these patients.

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THE WEEDS IN MULTI–ROW BARLEY AGROCENOSIS IN THE MODAL CHERNOZEM

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The weed plants in the spring barley monoculture are usually reduced the grain yield and its quality. During the period of the spring barley tillering, the number of weeds in the typical black soil (e.g. the modal chernozem) is practically reached 28–38 items/m^2, and their weight – 5,7–10,9 g/m^2. The seeding rate dosage is usually affected on the contamination of the crops. In embodiments with the Suzdalets two – row barley grade, the seeding rate dosage increase from 2 up to 6 mln. items/ha is practically reduced the number of the weeds per 1 m^2 for 10–15 pcs. So, in multiple – row barley, the reduction is reached 12 – 16 pcs. at the Vakula grade, and the 13–16 pcs. – at the Helios grade. The Bazagran herbicide application is practically allowed to be reduced the barley crops contamination in 2,7–8,7 times. The areas with the highest standards of the seeds sowing are cleaner of the weeds. The multiple – row barley crops, due to the increased tillering, have 1,4 – 2,0 times lower, than the weeds number, and to 1,2–1,9 times their weight, than the two – row barley crops.

Keywords: weeds, multi–row barley, agrocenosis, chernozem

The foreign plants, in the agricultural purpose monoculture, are practically lost their moisture, the nutrients, are spread their diseases and the pests, and are made the soil treatment more difficult, its care, and the harvesting. So, the weed plants competition with the field crops is practically caused the large damage to the agriculture. The spring barley crop losses, depending on the contamination degree, and the weed vegetation species, can be reached up to 30 %. In this regard, the weeds number regulation in the monoculture population is practically the significant and the topical relevant condition of the field culture productivity. So, the grain crops contamination reducing is provided the arrangement activities carrying out, as the preventing measures, having aimed at the crops optimal density formation, the weeds skidding prevention in the field, well as the fighter, having connected with the weed plants destruction in the crops [1].

Having given the barley significance in Russia, as the leading grain culture and the major cereal crop, the cereal, malting, and feed purposes, and, in 2010–2012-es, the field researches in the typical forest – steppe black soil (e.g. the modal chernozem) with the new released grade varieties of the Vakula and the Helios spring barley have been conducted by us.

The test area soil has had the weak – acidic reaction of the environment, the average availability of nitrogen, phosphorus and potassium, with the humus content 4.9 %. The barley sowing has been carried out with the space between the already made rows of 15 cm and the rate of 2; 3; 4, and 5 mln pieces of the viable and germinating seeds per hectare. The planting dates have been generally accepted for the Black Earth forest – steppe, and the technology – is quite typical for the region. To be controlled the Suzdaletz two – rowed spring barley has been sown simultaneously by the released grade varieties. All these seeds have completely been met the State Standards (e.g. GOST) on the planting qualities of the seeds sown PC – 1.

So, the barley contamination study has been carried out under the production conditions, where the Bazagran herbicide treatment, at the dose of 3 l/ha, has been held just in the beginning of the tillering phase. The Moscow – 56 winter wheat has been the barley predecessor.

In the result of the carried out researches, in the barley sowing it has been found, that the weed plants species composition, the number and its weight have been dependent on the weather conditions and the rules of the growing season of the sowing seeds. This is practically connected with the different requirements of the weeds separated and the individual species to the basic factors of the life, the competition field changing between the field crops and the weeds. In the weed component structure, the dominant group, the annual weeds group has been, both, as in number, well as in dry weight. The barnyard-grass (e.g. Echinochloa crus-galli), the lamb's-quarters (e.g. Chenopodium album), the yellow foxtail-grass (e.g. Setaria glauca), the odorless chamomile (e.g. Matricaria perforata), the common chickweed (e.g. Stellaria media), the shepherd's purse (e.g. Capsella bursa-pastoris), the shiritsy thrown back (e.g. Amaranthus retroflexus) have been observed their massive spread. And from the perennial weeds have sporadically been met the following: the field (or Canadian) thistle e.g. Cirsium arvense), the field sow thistle (e.g. Sonchus arvensis), the field or trailing bindweed (e.g. Convolvulus arvensis). So, the maximum contamination of the barley crops in the tillering phase had been observed I 2011 and 2012, which were characterized by the intensive rainfall during the growing season. The common chickweed (e.g. Stellaria media) has been the most widespread. Its share in the specific weight in the total mass of the weeds, by the results for the first time determining has