

Stress in the life and work of a farmer – its health effects.

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The XIV International Symposium on Ergonomics, Work Safety and Occupational Hygiene was held at the Institute of Agricultural Medicine in Lublin in October 2007. The Symposium was organized by the Institute in association with the Agricultural Social Insurance Fund (KRUS) and the Lublin Division of the Polish Association of Ergonomics.

The Organizational Committee was presided over by Prof. Jerzy Zagórski, President of the Ergonomics and Safety Commission of the International Association of Agricultural Medicine and Rural Health (IAAMRH), the Scientific Secretary was dr. Franciszek Bujak, and the Organizational Secretary doc. dr. habil. Leszek Solecki, President of the Lublin Division of the Polish Association of Ergonomics.

The scientific programme of the XIV International Symposium of Ergonomics, Work Safety and Occupational Hygiene in Agriculture covered issues associated with stress occurring in agriculture. It consisted of 6 problem sessions, consisting of 21 presentations and 5 workshops (in groups).

Problem sessions concerned the following:

1. stress in the modern world;
2. mobbing at work;
3. distant and short-term effects of stress;
4. non-characteristic stressors;
5. psycho-social effects of stress;
6. prevention of the effects of stress (workshops).

The first subject session (5 presentations) dealt with stress occurring in the modern world. According to the classical definition of stress introduced by the physiologist Hans Selye, this is a syndrome of physiological responses to difficult situations which threaten health and life. Another interpretation is that the term stress limits it to stimuli. According to another concept, stress is a special type of relationship between man and the environment.

Analysis of potential factors inducing stress in employees indicated that the most stressful factors are: physical environment, organizational structure of the enterprise, interpersonal relationships, development of the occupational

career of an employee, role of an employee at the enterprise, traits of the task to be performed, work-family conflict, and factors resulting from the organization of work. All these factors induce, in the longer time interval, the state of chronic psycho-physical fatigue, which in time may cause adverse health effects for the worker (occupational and civilisation diseases), as well as social consequences.

According to a report by doc. dr. habil. Marina Sterenbogen, there is an important problem of occupational stress among agricultural workers in the Ukraine. In occupational conditions present in agricultural enterprises, the employees are affected by many unfavourable factors, including: physical and nervous-emotional load, hazardous factors of the occupational environment, and psycho-emotional load resulting from unfavourable socio-economic changes.

In Poland, a prevention programme has been realized by the National Labour Inspectorate (initiated in 2006), biased towards counteracting the negative effects of psychical overload and stress at the place of work. This programme emphasizes methods of prevention, scope and principles of cooperation between the organizations of the providers, OSH services, trade unions, occupational medicine services, and State and local administration institutions. A subsequent edition of this programme will cover private farming.

The second important issue covered by the symposium (second subject session – 3 presentations) was mobbing and aggression at the place of work. Mobbing is the process of gradual isolation and increasing aggression at the place of work. The first stage is debarring from decision-making, followed by the subsequent stages: social isolation, personal attack covering the private sphere, followed by verbal aggression, which may proceed to threats and direct aggression. Two phases of the effect of mobbing are distinguished: an acute phase and a chronic phase. The following symptoms are typical of the acute phase: sleep disorders, hypertension, heart pains, inflammatory states of the stomach and intestines, muscular tension causing posture disorders leading to joint changes. The chronic phase is characterised by immune disorders, allergies, possibility of activation of cancer growth, and negative effect on the situation at home.

Among the effects of exposure to aggression there are differentiated those which appear directly after an attack, and those the effects of which are more distant in time. Directly after the attack the victim complains of an intensified feelings of anger, irritation, fear, depression, discouragement,

helplessness, relinquishment, and apathy; there may also appear feelings of guilt or decreased self-esteem.

The distant effects are, e.g. concentration disorders, addictions, fear disorders, occupational burnout syndrome, or even suicidal thoughts and attempts. The victims of aggression also report a number of somatic complaints, such as: headaches, recurrent migraines, peptic ulcer, vomiting, sleeplessness, sleep disorders, increase in muscular tone and sexual disorders.

The participants in the symposium were also familiarised with the legal aspect of mobbing, concerning the proof by virtue of mobbing, claims by the victim of mobbing based on the Labour Code and Civil Code regulations, as well as proposals for anti-mobbing actions.

The third subject session (4 presentations) concerned the distant and long-term effects of stress. The phenomenon of burnout syndrome was discussed, its causes, symptoms and prevention. It is assumed that burnout is a psychological syndrome occurring as the result of chronic interpersonal stress experienced at work, which consists of exhaustion, the sense of cynicism and isolation, decrease in satisfaction with occupational achievements, and the lack of effectiveness of activities. The negative effects of burnout are: absenteeism at work, shortening of working time, readiness to give up employment, and a decrease in the efficiency and quality of work. The causes of burnout are abnormalities in the spheres of occupational activity.

The participants were made familiar with the occurrence in farmers of chronic lumbar pain syndromes, the mechanisms of the phenomenon of neuropathic pain in spinal diseases, and strategies for therapies with consideration of the elimination of the stressor.

Attention was also paid to the fact that stress is the most important etiologic factor of functional gastrointestinal disorders, accompanied by complaints typical of the alimentary system (nausea, eructation, diarrhoea, stomach pain, constipation, discomfort in the abdominal cavity), although no changes are observed in endoscopy, imaging, and laboratory tests, or during physical examination.

Doc. dr. habil. A. Wojnałowicz from the Ukraine evoked the interest of the participants in problems connected with the state of employees' stress among agricultural workers. An elevated psychological state among agricultural workers is due to such factors as: the seasonal and field character of work activities performed in plant production, uninterrupted cycle of animal production, exploitation of mechanization means of high energy saturation, often with a lack of technical means of safety.

The fourth session (5 presentations) was devoted to non-characteristic stressors. One such stressor is unemployment which, to a considerable degree, concerns rural families. The dominant states among the unemployed are depression, irritation, fear, anxiety, the sense of lack of perspectives, inability to realize life plans, and lack of faith in a change for the better. Due to difficulties with the occupational activation of unemployed rural inhabitants, unemployment in rural areas is of a long-term, or sometimes even chronic character. Unemployment is the main cause of the poor material standard in rural families, and contributes to the pathological behaviours, also among the members of these families, such as addiction or violence.

An interesting problem presented during the Symposium was the stress of leisure, i.e. the stress of 'doing nothing'.

This develops in people who attempt to realize the greatest number of goals possible, sometimes with such goals being unclear, within the shortest time possible, resulting in the full mobilization of the body and activity of the brain in the form of negative, destructive thoughts. This negative brain activity is responsible for impairment or blockage of regenerative functions of the human body which makes rest impossible.

Stress occurring in agriculture may also be the cause of occupational accidents. According to the NIOSH, the occupation of a farmer is placed among the first 10 most stress-inducing professions. The factors leading to the development of stress among farmers are: the difficult economic situation of farms, unpredictable weather, pressure of time, unforeseen events, government decisions, or even the geographic isolation of farmers. All these factors result in the persistence of long-term stress, consequently leading to behaviours which clearly decrease the level of work safety.

The feeling of threat also occurs in rural children, in association with performance of work activities on family farms. More than a half of the children in the survey experienced fear of accident, more than 25% were afraid of various diseases which they may acquire during work, and some children feel unhappy (approx. 20%) or used (9%) while undertaking agricultural work activities.

Difficult events in the life and work of a farmer also cause stressful effects of various strength and weight. Farmers most often mention such stressful events as the death of a friend, necessity for changing dietary habits, accident, disability or own serious disease, as well as loss of employment by a family member.

During the fifth session (4 presentations) the psycho-social effects of stress were discussed. Civilisation development, apart from the effect undoubtedly favourable for the functioning of individuals and social groups, results in a number of negative side effects. These effects are, among others, ecological stress resulting in distant effects on health, such as cancer, neuroses, depressions, psychosomatic diseases, or other civilisation diseases.

Another effect of stress and chronic fatigue is depression, which results in the development of a number of clinical problems and depression disorders.

The chronic fatigue syndrome (CFS) is the disease of people of success. Such fatigue may be accompanied by the following symptoms: loss of efficiency of short-term memory and concentration, sore throat, tenderness of lymphatic nodes, muscular pain, joint pain, headaches of intensity or location than previously experienced, sleeplessness or sleep which does not provide rest, or post-effort weakness or fatigue lasting longer than 24 hours. Neurotic situational reactions occurring among adolescents may be the cause of undertaking suicidal attempts.

The sixth session was organized by the workshop method (training in groups) and covered 5 issues. The subject of this workshop was the practical presentation of how it is possible, in home conditions and without specialist equipment, to maintain and strengthen one's own psycho-somatic potential, and how, in critical situations, to restore the disturbed psycho-physiological homeostasis.

The strategy for coping in difficult occupational relations was presented. The participants received guidelines on how to rid oneself of stressful emotions and use them in relations with a supplicant or co-worker.

In order that stressful situations, to which we are subject throughout our entire lives, do not become the cause of mental health disorders, we should recognize the ways of coping with stress and their efficiency, and then specify to what extent these ways are useful for us, if it is worth introducing changes in our behaviour which would protect our health rather than harm it.

The participants were also made familiar with post-traumatic stress disorder (PTSD) and the method of psychotherapy. The syndrome of post-traumatic stress disorder affects the functioning of a human being, and is a delayed response to a traumatic external experience.

The scope of problems concerning proper rest was also discussed. It is worth considering what hinders our enjoyment of rest and leisure, and how to rest properly. In order to rest it

is necessary to become tired, whereas in order to be active, it is necessary to rest first. The alternate states of rest and intense activity demand balance, otherwise there occurs long-term and dangerous exhaustion.

A group of 102 researchers from Poland and abroad participated in the Symposium. Publication of full versions of the presentations in the form of a monograph of the Institute of Agricultural Medicine will provide a better knowledge of the difficult issues concerning stress in the life and work of a farmer. We also express the hope that the publication will evoke the interest of decision-makers (officials at the Ministry of Agriculture and local governments) responsible for proper agricultural policy, as well as health services and the farmers themselves, which would contribute to the undertaking of proper preventive and therapeutic actions.