

nious behavior of women to be caused by their emancipation. Though, it recently was accepted to think that the main reason of antisocial behavior of women was their wish to provide for their family.

Historically in all communities female labor has been resulted as hard and poorly-paid as compared with men. So evidently that such types of crimes as prostitution and theft are spread among young women. The fact is that low property level always made women cut many attractive values of modern youth down: fashionable clothes, clubs, parties and so on. Undoubtedly, it causes feel of infringements and deeply jaundices women. This fact quite often makes them commit crimes concerning mercenariness or prostitution. Thus, for example, according to official statistics of MIA of late six months of this year there were committed 125591 crimes by women; 8548 of them are under age³.

Secondary role among crimes in Russian Federation belongs to diffusion and using drugs and psychotropic agents, so as their analogs. It sharply concerns such boundary inhabited localities as Astrakhan region, because it stands as transit of narcotic drugs from Middle Asia to Europe. As a rule, drug transportation puts into practice with the help of autotransport, train and by ship through Caspian Sea (for example Turkmenbashi – Astrakhan)⁴.

According to statistics, middle percentage of crimes, committed on the territory of Astrakhan region concerns 0,2%. Among them 6,9% Astrakhan women commit crimes. Almost all delinquents are women of 16 and more years old. According to the level of education, the largest part belongs to women with school (63%) and college education (21%), and then there are women with higher education (3,5%). As always, common mass of junkies belongs to women without confident source of profit, among them 1,3% of pupils and 1,6% of students.

Coming back to the problem of female crimes, it's necessary to notice, that its difficulty and incurability is stipulated by difficulties in process of resocialization that is much harder to overcome for women than those by men. Also a women committing crimes has the most dangerous influence on society. It causes invaluable development of family where the most important role in bringing up new generation belongs to a woman. That is why the problem of female crime is the most actual nowadays and demands especial attention of government and society in general.

The article is admitted to the International Scientific Conference "Fundamental and applied research. Education, economics and right"; Italy (Rimini), September 8-15, 2007; came to the editorial office on 25.07.07

³ www.mvdinform.ru

⁴ http://atlas.socpol.ru

RHIZOCTONIA II GAEUMANNOMYCES SPECIES COMPOSITION UNDER THE CONDITIONS OF WESTERN SIS-CAUCASIA

Zhalieva L.D.

Krasnodar Lukyanenko Research
Institute of Agriculture

Western Sis-Caucasia root rot pathogen population has been studied at Krasnodar Lukyanenko Research Institute of Agriculture for three decades. It is presented by the following genera: *Alternaria*, *Pythium*, *Helminthosporium*, *Wojnowicia*, *Fusarium*, *Cercospora*, *Gaeumannomyces*, *Rhizoctonia*, which have various occurrence frequencies on winter wheat. The share of *Rhizoctonia* fungi has been reported to exceed in frequency all other pathogens. The *Rhizoctonia* fungi, causing root rot on winter wheat, include several species: *Rhizoctonia solani* Kuhn. Teleomorph - *Thanatephorus cucumeris* (A. B. Frank) Donk, *Rhizoctonia cerealis* Van der Hoeven. Teleomorph - *Ceratobasidium cereale* D. Murray & L. L. Burpee (Anastomosis – AG-D.) u *Rhizoctonia oryzae* Teleomorph - *Waitea circinata* var *oryzae* (Anastomosis WAG-0); *Rhizoctonia zae* Teleomorph - *Waitea circinata* var. *zae* (Anastomosis WAG-Z), and *p. Gaeumannomyces* - *G. graminis* var *tritici*, *G. graminis* var *avenae* u *G. graminis* var *graminis*.

Rhizoctonia fungi have been widely studied on grasses, since they tend to cause serious damage to the plants covering golf-links. On grain crops these fungi have been observed in the USA by D.M. Weller et al. (2002), R.J. Cook (1981), R.W. Smiley and D.E. Wilkins (1992), A. Ogoshi (1987), in Australia by J.S. Gill, K. Sivasithaparam and K.R.J. Smet-Fem, in Germany (especially on malting barley), in Turkey by E. Demirci, C. Eken and H. Zengin (on sorghum), in Korea by Dong-mei Li, Ke-qiang Cao (2001), in Japan by T. Tsukiboshi and T. Kimigafukuro (1993). They have mostly identified *Rhizoctonia solani*, and less often *Rhizoctonia cerealis* or *Rhizoctonia oryzae*.

In the Ukraine in the 1970-s root rots on grain crops have been considered to be caused by *Rhizoctonia solani*, but more recently the pathogen have been proved to be *Rhizoctonia cerealis*. According to the Russian researchers Dolzhenko, Zdravetskaya, Burkova et al. (2003), in the Northern Caucasia root rots on grain crops are caused by *Gaeumannomyces*, *Fusarium* and *Pseudocercospora* sp. Vlasova, Nikitina and Zhukova (All-Russian Plant Protection Institute) reported in 1995 that in Rostov region root rots on grain crops were caused by *Fusarium-Pseudocercospora* fungi.

In recent years *Rhizoctonia* sp. have been occurring on winter wheat more and more often, while in the 1970-s this pathogen did not even damage cereal crops. Z.A. Bochkareva and L.N. Tarasenko reported in 1974 that root rots were caused by fungi belonging to *Fusarium culmorum*, *F. sporotrichiella*, *Ophiobolus*

graminis, *Wojnovicia graminis* and *Helminthosporium sativum*.

Gaeumannomyces fungi have first been described in Australia in 1852 (154 years ago).

S.D. Garrett (1981), H.E. Nilsson and J.D. Smith (1981), D. Hornby (1998), R.J. Cook and D.M. Weller (1987) are among those numerous scientists who have been studying fungi belonging to this genus.

According to Garrett, grain crop diseases caused by these fungi are spread wherever these crops are grown in temperate and arid zones under irrigation. This disease has been admitted the most devastating disease damaging cereals.

The material has been collected during route inspections carried out jointly with regional and local plant protection stations. Pathogens were isolated in accordance with the conventional methods adopted in mycology using selective media.

Our studies carried out at KNIISH in the 1980s revealed a small share of *Rhizoctonia* sp. (2-5%) in the complex of pathogens causing root rots. In 1990 their occurrence frequency in the northern part of the region (farm "Rossia" Pavlovskij area) averaged 3%; in the central part (farm "Rodina" Ust-Labinsk area) – 5.1-13.1%, in the southern sub-mount part (farm "Nasha Rodina" Gulkevichskij area) – 1%.

Our research has shown that the share of *Rhizoctonia* fungi in the Western Sis-Caucasia has been steadily growing compared to other pathogens. In Krasnodar region the share in 2000 accounted for 16%, in 2001 – 26.2%, in 2002 – 33%, in 2003 – 36.5% in 2004 – 38% and in 2005 – 40.5%. In the last years the rate of growth has slowed down from 10.2% in 1999-2000 to 2.4% in 2004-2005.

The visual symptoms of *Rhizoctonia* disease on cereal crops include thick brown coating of mycelium and sclerotium covering the root surface. The damaged tissue gets brown. This type of damage is also characterized by distinct eye spot. Ellipse-shaped light spots emerging at the base of leaf sheath and straw have distinct dark-brown edges, which help to distinguish them from *Cercospora* spot disease. The spots which appear mainly on leaf sheaths may reach 15-25 mm in length. The major sources of primary infection are usually *Rh. solani* sclerotia accumulated in soil and mycelium contained on plant residues. The sclerotia maintain their viability in soil for two years. The major role in disease development belongs to the fungus mycelium, which is characterized by intensive growth. Under favorable climatic conditions (darkness, humidity up to 95% and air temperature 28-30°C) the infection quickly spreads to the upper parts of plant, including leaf blades, and even to the neighboring plants. Mycelium fragments may be dispersed to long distances by wind and cause new infection.

According to the data of the International Rice Growing Institute, there exist no sources of immunity.

Rice varieties, which are resistant to *Rhizoctonia* at the sprouting stage, may become susceptible at the stage of maturation and vice versa. In the Russian Federation the problem of winter wheat resistance to *Rhizoctonia* fungi has not been studied, neither were studied the strains of the fungus causing *Rhizoctonia* root rot on cereals.

In our studies *Rhizoctonia* fungi have been isolated on root rot damaged winter wheat plants grown after all studied previous crops but for fallow. In Rostov region the frequency of these fungi on plants grown after winter wheat varied between 1 and 19.5%, after peas – between 0.5 and 5.5% and after corn – between 3 and 13% depending on the climatic and geographical conditions.

Fungi belonging to this genus were isolated on winter wheat plants starting from the germination stage and through to the stage of full grain ripeness. At the tillering stage their share among other pathogens varied between 0.5-16% and at the grain filling – 17.5-38.5% depending on the year conditions. The *Rhizoctonia* fungi, causing root rot on winter wheat, include several species: *Rhizoctonia solani* Kuhn. Teleomorph - *Thanatephorus cucumeris* (A. B. Frank) Donk, *Rhizoctonia cerealis* Van der Hoeven. Teleomorph - *Ceratobasidium cereale* D. Murray & L. L. Burpee (Anastomosis – AG-D.) u *Rhizoctonia oryzae* Teleomorph - *Waitea circinata* var *oryzae* (Anastomosis WAG-0); *Rhizoctonia zeae* Teleomorph - *Waitea circinata* var. *zeae* (Anastomosis WAG-Z), and *p. Gaeumannomyces* - *G. graminis* var *tritici*, *G.graminis* var *avenae* u *G. graminis* var *graminis*.

Root rot causing fungi belonging to *Gaeumannomyces* genus are widely presented in the Western Sis-Caucasia. They can cause root rot, foot rot or mixed type rot disease on winter wheat. We have observed that the pathogen better survives in dry summers. We have isolated *G. graminis* var *tritici*, *G.graminis* var *avenae* and *G. graminis* var *graminis* on winter wheat growing in the Western Sis-Caucasia. Although, their occurrence and frequency fluctuated depending on the year conditions, location and even previous crop.

We have isolated various strains of these fungi and examined their pathogenicity to 35 varieties developed in Krasnodar, Odessa and Zernograd. Resistant varieties have not been detected.

Currently, we continue studying biological properties of *Rhizoctonia* and *Gaeumannomyces* fungi, as well as the necessity and availability of means to control root rot on winter wheat.

The article is admitted to the International Scientific Conference "Higher education institution science prospects"; Sochi (Dagomys), September 20-23, 2007; came to the editorial office on 01.08.07