

INFLUENCE OF FEEDING WITH IRON BIOSTIMULANT THROUGH THE LEAF ON GRAIN IN KIND WEIGHT OF DURUM WHEAT

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Annotatsiya. Ushbu maqolada qattiq bug'doy Zilol navining don naturasiga tuplash, naychalash va boshqalash davrlari bo'yicha ildizdan tashqari temir ultra disper kukun (TUD) biostimulyatori bilan turli me'yorlarda ishlov berishning ta'siri o'rganilgan va tahlil qilingan.

Kalit so'zlar: microelement (Fe), NPK o'g'it, qattiq bug'doy (*Triticum durum*) Zilol, tuplash, naychalash, boshqalash, don naturasi

Аннотация. В этой статье изучаются и анализируются эффекты обработки биостимулятором внекорневого ультрадисперсного порошка железа (TUD) на 1000 зерен твердых сортов пшеницы Зилон в различных дозировках в периоды кушения выход в трубку и колошения.

Ключевые слова: микроэлемент (Fe)б НПК удобрениеб пшеница твердая (Тритикум дурум)б Зилолб кушениеб выход в трубкуб колошениеб зерно природа

Abstract. This article studies and analyzes the effects of treating foliar ultrafine iron powder (TUD) with a biostimulant per grain nature of durum wheat Zilol in various dosages during the periods of tillering, booting and heading.

Keywords: Microelement (Fe), NPK fertilizer, durum wheat (*Triticum drum*), Zylol, tillering, booting, heading, grain nature

Introduction. Wheat crop consider the most important cereal crop in the world with regard to cultivated area and total production. So, wheat is an essential cereal crop, basis of staple food and thus the most important crop in food security potential.

Nutrients deficiency is major problem facing crop production globally, especially in eastern European countries. So, a balanced fertilization program with considering both macro and micronutrients in plant nutrition is very important in obtaining high yields of high quality. The role of macro and micro nutrients as a key in crop nutrition is important for achieving higher yields [1].

Micronutrients are in general used in smaller amounts than the macronutrients, but are just as important for optimum yield. Foliar application is more benefits than top dressing in the soil surface. This is due to specific soil conditions where the nutrients can be lost by leaching or fixed by chemical reactions. Iron is one of the important essential micronutrients required for higher plants to complete live cycle. Iron nutrient is critical for chlorophyll formation, photosynthesis, plant enzyme systems and respiration (2) and or plays role in biological redox system enzyme activation and oxygen carrier in nitrogen fixation [3].

One of the most important quality indicators of grain is technological quality indicators of grain, which includes indicators such as protein content, gluten content, grain shine, nature, flour strength, viscosity, and bread size [4].

Materials and methods. Field experiments were carried out at Experimental station in Southern Research Institute of Agriculture in Kashkadarya. In the experiments, mineral fertilizers were applied to winter wheat "Zilol" at the rate of NPK = 180:90:60 kg/ha. All the P and K was applied at sowing time, while N was applied in three splits. and The iron were applied three times, tillering, jointing and heading stage. Iron at the rates of 6%, 9%,

and 12% in the tillering, jointing, and earing phases. All the other agronomic practices were kept uniform.

T1 = no spray with NPK 180:90:60 kg/ha

T2 = NPK 180:90:60 kg/ha + spraying plants with 6 % (TUD) tillering

T3 = NPK 180:90:60 kg/ha + spraying plants with 6 % (TUD) jointing

T4 = NPK 180:90:60 kg/ha + spraying plants with 6 % (TUD) heading

T5 = NPK 180:90:60 kg/ha + spraying plants with 9 % (TUD) tillering

T6 = NPK 180:90:60 kg/ha + spraying plants with 9 % (TUD) jointing

T7 = NPK 180:90:60 kg/ha + spraying plants with 9 % (TUD) heading

T8 = NPK 180:90:60 kg/ha + spraying plants with 12 % (TUD) tillering

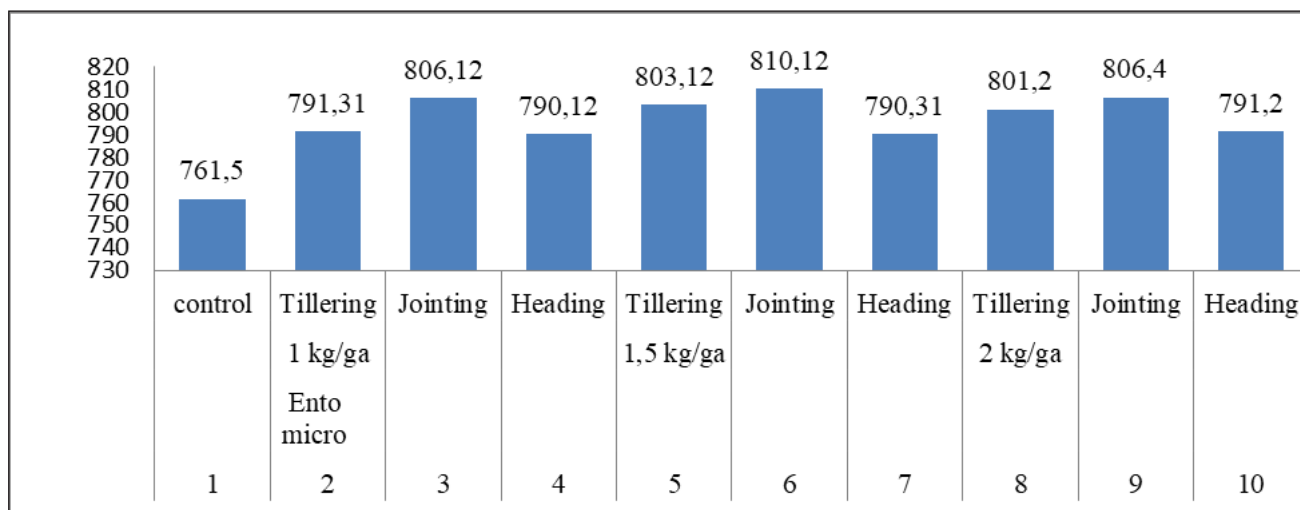
T9 = NPK 180:90:60 kg/ha + spraying plants with 12 % (TUD) jointing

T10 = NPK 180:90:60 kg/ha + spraying plants with 12 % (TUD) heading

Result and discussion. The date presented in table 1 revealed that foliar application of TUD significantly increased the grain in kind weight. According to the results of the analysis, it was found that the grain nature of the Zylol grain of winter durum wheat was significantly changed under the influence of the applied biostimulant (TUD). In particular, in the Zylol variety of durum wheat, organized the weight of the grain is 761.5 g/l in the control variant without biostimulants. Maximum the grain in kind weight was observed 810.12 g/l in T6 treatment TUD 9 % + NPK jointing stage. grain in kind weight was increased by 48.62 g/l as

Table 1.

Effect of foliar feeding of nutrient the grain in kind weight of hard wheat



compared with the control.

As a result of the use of biostimulant TUD at the rate of 6 % in the period of tillering, jointing and heading, the grain weight of the plant was 791.31 g/l, 806.12 g/l, 790.12 g/l, weight of the grain was increased by (according to the norm of (6 %); 29.81; 44.62; 28.62 g/l. compared with the control

Also, in researches, when iron is applied with biostimulator of TUD in the period of jointing stage of wheat crop at the rates of 6 %, 9 % and 12 %, the weight of grain in kind organized 803.12;

810.12; 790.31 g/l. , weight of the grain was increased by 41.62; 48.62; 28.81 g/l. ga compared with control.

As a result of the feeding treatments of TUD at the rate of 9 % in the period of jointing, increased by 4-3.72 g/l tillering and jointing stages 6 % and 12 % treatments compared with control.

Conclusion. Therefore, complex feeding of wheat plants with mineral fertilizers NPK=180:90:60 kg/ha and biostimulator of TUD in the period of extra-root jointing stage, grain quality indicator has a significant effect on the nature of grain.

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