

THE EFFECT OF APPLICATION OF MINERAL FERTILIZER RATE AT DIFFERENT DEPTH ON THE NUMBER OF PRODUCTIVE STEMS OF WINTER WHEAT.

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Article history:		Abstract:
Received:	26 th August 2024	It is well known that the wheat plant requires nutrients at different levels from seed germination to the ripening phase. If these nutrients are not available in the soil, nutrient deficiency begins to occur in the vegetative organs of the plants, especially in the stems, leaves and spikes. As a result of the occurrence of food shortage, the biometric indicators of the varieties change to different degrees. Taking these circumstances into account, we also conducted observation and analysis of variants in our research conducted in 2015-2018 in order to determine the effect of the factors applied to variants on the height, total and productive stems of winter wheat varieties.
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According to the obtained results, when the seeds of "Yaksart" variety of winter wheat were sown and analyzed the maintained options, the high results were 10-12 of the soil; 22-25; It was noted that the 35-40 cm layers of mineral fertilizers were obtained from the options where the norms of N₁₀₀P₅₀K₅₀ kg/ha were applied. In particular, by the end of the application period, it was observed that the number of productive stems was 143,4 units/m², and the proportion of productive stems was 2,2% higher than the 4th option, in which the norms of mineral fertilizers N₁₀₀P₅₀K₅₀ kg/ha were applied to the 10-12 cm layer of the soil. It was found that the number of productive stems was 155,2 units/m², and the proportion of productive stems was 2.0% higher than the 5 th option, in which the norms of mineral fertilizers N₁₀₀P₅₀K₅₀ kg/ha were applied to the 22-25 cm layer of the soil.

It was found that the number of productive stems was 135,1 pieces/m², and the proportion of productive stems was 2,4 percent higher, respectively, compared to option 6, where the norms of mineral fertilizers N₁₀₀P₅₀K₅₀ kg/ha were applied to the 35-40 cm layer of the soil.

Table 1
Effect of applying mineral fertilizers at different depths on height, total and number of productive stems of winter wheat, 2015-2016.

Nº	Winter wheat varieties	Annual rates of mineral fertilizers, kg/ha	Depth of application of mineral fertilizers, cm	Total number of stems, pieces/m ²	The number of productive stems, pieces/m ²
1	Yaksart	N ₁₈₀ P ₉₀ K ₆₀	10 – 12	624,6	530,9
2			22 – 25	683,2	583,5
3			35 – 40	572,9	485,8
4		N ₁₀₀ P ₅₀ K ₅₀	10 – 12	500,0	420,0
5			22 – 25	549,9	463,6
6			35 – 40	445,9	374,6
7	Hisorak	N ₁₈₀ P ₉₀ K ₆₀	10 – 12	626,3	532,4
8			22 – 25	690,0	588,6
9			35 – 40	572,9	486,4
10		N ₁₀₀ P ₅₀ K ₅₀	10 – 12	493,5	414,6
11			22 – 25	538,8	453,6
12			35 – 40	437,4	367,0
13			35 – 40	605,6	517,2

The above laws were also proven when the biometric indicators of the plants in the options where the seeds of the winter wheat variety "Hisorak" were planted were studied. the number of productive stems is 161,8-158,8-153,1 units/m², and the ratio of productive stems to total stems is 2,7-1,8-2,4 compared to the 16-17-18 options, where the norms of mineral fertilizers N100P50K50 kg/ha are applied percent higher result was noted.

Summary. Based on the results obtained from the experimental options, we can conclude that the depth of application of the norms of mineral fertilizers affects the number of productive stems.

LIST OF USED LITERATURE

1. Орипов Р.О., Халилов Н.Х. Ўсимликшунослик. Ўқув қўлланма. Тошкент-2006. Б. 64-69.
2. Турсунов Л. Тупроқ физикаси. Ўқув қўлланма. Меҳнат нашриёти. Тошкент-1988. Б. 53-70.
3. Сиддиқов Р. «Суғориладиган ерларда кузги буғдой етиштириш технологиясини такомиллаштиришнинг илмий-амалий асослари» «Автореферат» Тошкент-2007. Б. 14-18.
4. Убайдуллаева Д.И. Суғориладиган бўз-ўтлоқи тупроқлар шароитида ўғитларнинг кузги буғдой ҳосилдорлигига таъсири (Қашқадарё вилояти мисолида) // Қишлоқ хўжалиги фанлари номзоди илмий даражасини олиш учун ёзилган диссертация автореферати. -Т.: 2008. -Б. 3.
5. Федотов П.И. «Парное и тройное внесение II. Р.К. под озимую пшеницу при орошении». / Тр УзНИИЗ. Тошкент. 1984. вып. 21. С. 89-94.
6. Хакимов Ш.З. Наманган вилоятининг эскидан суғориладиган оч тусли бўз тупроқларида кузги буғдой навларида минерал ўғитлар меъёрларини самарадорлиги // Қишлоқ хўжалиги фанлари номзоди илмий даражасини олиш учун ёзилган диссертация автореферати. -Т.: 2008. -Б. 3.