ABSTRACT: Two field experiments were carried out at the Experimental Farm, faculty of Agriculture, Menoufia University, Shebin El-Kom, Egypt during 2015/2016 and 2016/2017 seasons to investigate the effect of various combinations of mineral and organic fertilization systems (mineral nitrogen, organic nitrogen, phosphate ore and potassium ore) beside without fertilization treatment on morophysiological characters, leaf nutritive status, yield and its components and technological and rheological parameters of some bread wheat varieties (Gemmeiza 11, Gemmeiza 12, Giza171, Misr 1 and Sids 13). The results obtained could be summarized as follows:

1- Fertilization with any mineral and/or organic fertilizers caused increases in most characters studied. Application of 50% mineral N + 50% organic N/fed was superior to the other fertilization systems in morophysiological characters (flag leaf area and chlorophyll content), leaf nutritive status (N content), yield and its components (number of spikes/m², number of grains/spike, grain yield/fed and straw and biological yields/fed) and technological and rheological properties (protein, wet and dry gluten, flour whiteness, water absorption and dough stability) compared to other fertilization systems especially unfertilized plants which recorded the lowest values.

2- Data indicated that Giza 171 and Gemmeiza 11 varieties surpassed the other varieties in most morophysiological characters (plant height, flag leaf area and chlorophyll content), leaf nutritive status (N, P and K contents), yield and its components (number of spikes/m², spike length, number of grains/spike, 1000-grain weight, spike weight, grain yield/fed and straw and biological yields/fed) and technological and rheological properties (protein, wet and dry gluten, flour whiteness, water absorption and dough stability) in favor of Giza 171 variety in most economic characters.

3- The interactions between fertilization systems and wheat varieties were found to be significant for most characters studied. It could be concluded that Giza 171 variety fertilized with 50% mineral N + 50% organic N/fed being the most effective combined treatment for maximizing most economic characters, where recorded the highest values of grain yield (3.869 and 3.906 ton/fed in the first and second seasons, respectively) under the environmental conditions of Menoufia governorate.

Key words: Fertilization systems, wheat varieties, yield, technological and rheological properties.
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Title: Qualitative and Technological Characteristics of New Bread Wheat Cultivars Under Fertility and Organic Systems

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The research was conducted in two experiments in the experimental field of the Agriculture Faculty, Minufya University, Sharkia, Egypt during the cultivation seasons 2011/2012 and 2012/2013. The aim of the study was to investigate the effect of mixed fertilization systems (mineral nitrogen, organic nitrogen, phosphorus ore, potassium ore) in addition to the control (without fertilization) on the morphological, physiological, chemical composition, yield, and technological-riological characteristics of five bread wheat cultivars (Jemiza 11, Jemiza 12, Egypt 1, Jezira 121, Soud 13).

1. It was found that adding the fertilization systems (mineral or organic or chemical) led to an increase in most of the studied characteristics, where the nitrogen rate of 20% N and 20% N organic / hectare exceeded the average fertilization rate of 20% N, in increasing the morphological characteristics (leaf area, stomata) and the content of the leaves of the elements of nitrogen, phosphorus, potassium, the yield and its components (number of spikes per square meter, number of grains per spike, yield of grains and straw, physiological yield of 1000 grains, and technological-riological characteristics (protein and starch humidity, starch stability, water absorption rate, gluten volume) compared to other fertilization systems, especially the un-fertilized plants that showed lower values for most characteristics.

2. It was confirmed that some of the characteristics of the grain of cultivar Jemiza 121 were the highest, while some of the characteristics of the mineral fertilization systems were higher than the organic systems.

3. The results showed a significant interaction between the fertilization systems and the cultivated cultivars for most of the studied characteristics, where the highest yield of wheat grain was obtained from the treatment of cultivar Jemiza 121 with a nitrogen rate of 20% N and 20% N organic / hectare, which is the best mixture for increasing the yield of wheat grain.