

RESPONSE OF WHEAT TO WEED CONTROL BY USING DIFFERENT HERBICIDES AND EFFECT INTO YIELD GRAIN

S. H. A. Al-Ziady¹, R. K. Shati¹, S. S. Ali², A. M. Hamid² and F. A. Abboud²

¹Department of Field Crop, College of Agriculture, University of Baghdad, Iraq.

²Ministry of Agriculture, Iraq.

*e-mail: saddnov1981@gmail.com

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ABSTRACT : A field experiment was conducted at the Mahaweel Wheat Research Station of the National Program for the Development of Wheat Cultivation in Iraq in Babylon province during the agricultural season 2016-2017 with the aim of identifying the effect of newly introduced wheat herbicides in Iraq (pallas, sortie and ponanza) into weed control of wheat (Class: Aba 99) and the effect of the grain yield and the accompanying weeds. Use the random complete block design (RCBD) and three replicates. The treatment of Pallas gave less average number of weeds (leaves narrow, leaves broad and the total number was 1.3, 3 and 4.3 plants. m² respectively, while weedy gave the highest average values 33, 28.2 and 61.2 plants. m² respectively, so the control percentage of these characteristics was 96.1%, 89.4% and 92.9%, respectively. These herbicides also affected the same effect into inhibition of the dry weight of weeds was 96%, 94% and 88%, respectively. The behavior of the herbicides differed in their effect on the components of the crop. The highest sortie treatment gave average a total of 61 grains.spike⁻¹. Pallas gave the highest average grain yield of 698 g. m².

Key words : Yield grain, weed control, response wheat.

INTRODUCTION

Triticum aestivum L. is the first place in Iraq and the world in terms of the cultivated area, the quantity of production and The economic return achieved, in addition to providing the human with about 25% of the calories and protein so it is a major food crop for more than 1.5 billion people living in 40 countries representing 35% of the world population (Harrison and Lien, 1989). The productivity of the unit of land in this crop was doubled at the end of the 20th century due to the increasing use of modern methods of production of improved varieties, pesticides, fertilizers and mechanization. However, the food gap is still increasing due to the abuse of natural resources from side and increase the population with an engineering transition on the other hand while the food is increasing with numerical moderation (Elsahoki *et al*, 2009). Iraq is one of the first citizens of the emergence of wheat, where the factors of production are available, such as water, soil and climatic conditions, but the productivity of this crop is still low compared to the rate of global production and developed countries (Shati, 2014). This is due to the failure to follow the scientific methods to grow this crop and its service, The most important of which is the weeds control, is influential and determining factor in the growth and production of

this crop (Shati and Al-Lami). This crop in Iraq is exposed to various agricultural pests, especially the weeds, which causes a loss of grain yield of 30-50% and may reach 70% depending on the type and intensity of the weeds prevailing in the field. In Iraq, there are about 12 species of narrow-leaves, weeds and 16 types of broad-leaves weeds (Shati, 2008). These weeds cause large losses in the productivity of the area unit. Therefore, chemical herbicides were used to control these plants and gave very good results. The excessive use of these herbicides led to some kind of resistance of some types of weeds so companies producing to herbicides have been manufacturing herbicides characterized by high efficiency and high selectivity and rapid evaporation of the environment and low rates of use. These herbicides have been used by researchers in several countries of the world and have achieved very good results in this regard. In Iraq appeared of past years there has been resistance in some of the wild barley species (Abu Suweif) to some herbicides specialized in narrow weed control with wheat. The aim of this research is to find out the effect of some herbicides in reducing these weed and other accompanied weeds of wheat and the effect on grain yield.