The effects of organic fertilizer, Zn and Fe spraying on corm yeild and phospuorus uptake of saffron((Crocus sativus L.)

Saffron is one of the highly prized spices known since antiquity for its color, flavor and medicinal properties.The current study investigate the effects of different levels of nutrient and foliar application on stigma and flower yield of saffron. Saffron flowering can be mainly affected by mother corm size and phosphorus content of corm. In order to investigate the effects of mother corms size, organic fertilizers and foliar application on corm yield and phosphorus uptake of saffron (*Crocus sativus* L.) under control conditions, an experiment was conducted in the growing years of 2012-2013 at Faculty of Agriculture, Ferdowsi University of Mashhad, Iran, by using a complete randomized design with 24 treatments and three replications. The mother corms size (0.1-4 g (small), 4.1 – 8 g (medium) and 8-12 g (large), organic fertilizers (cow manure 25 t. ha^{-1}, vermicompost 10 t. ha^{-1},compost 10 t. ha^{-1} and control) and micro nutrient (Fe-EDTA and Zn-EDTA) in two levels (foliar application and no application) were the first, second and third experimental factors, respectively. Based on the results, the highest number and yield of replacement corms were observed by using the large (8.1-12g) mother corms. The effect of cow manure on replacement corm yield was significantly more than other organic fertilizers. The effect of foliar application on replacement corms yield were also significant. In addition, the highest concentration and content of phosphorus replacement corms was observed by using the large (8.1- 12g) mother corms. The content of phosphorus in replacement corms was significantly decreased by reducing the size of the mother corms.