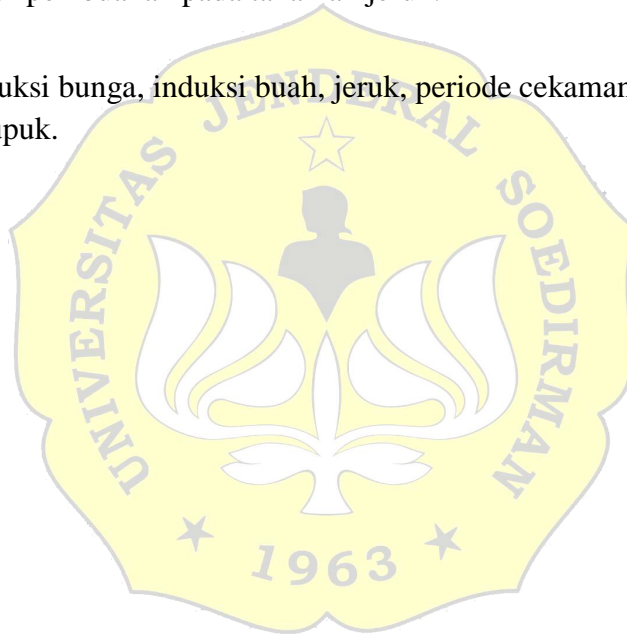


## RINGKASAN

Jeruk merupakan salah satu komoditi buah-buahan yang mempunyai peranan penting di pasaran dunia maupun dalam negeri, baik dalam bentuk segar maupun olahannya. Produksi jeruk di Indonesia tahun 2015 diperkirakan sebesar 2,40 juta ton dan terus meningkat hingga tahun 2019 dengan perkiraan produksi sebesar 2,77 juta ton. Periode panen raya jeruk yang bersamaan seringkali menjatuhkan harga pasaran komoditas tersebut, sehingga diperlukan teknik panen jeruk pada masa *off season* atau dapat panen diluar musim panen untuk dapat meningkatkan produksi jeruk dan menstabilkan harga jeruk dengan tujuan meminimalisir kerugian petani. Upaya untuk meningkatkan produksi jeruk ataupun untuk menstabilkan harga jeruk dipasar salah satu caranya yaitu menggunakan teknik budidaya dengan merangsang pembungaan jeruk pada masa *off season* atau diluar waktu panen dengan melakukan cekaman air dan pemupukan. Penelitian ini bertujuan untuk (1) mendapatkan periode stres air paling baik untuk induksi pembungaan dan pembuahan tanaman jeruk, (2) mengetahui pengaruh pemberian pupuk AB mix terhadap pembungaan dan pembuahan tanaman jeruk, dan (3) mengetahui interaksi antara pemupukan dengan stres air pada tanaman jeruk. Penelitian ini dilaksanakan pada bulan Januari 2020 sampai dengan Mei 2020 di *screen house* Fakultas Pertanian, Universitas Jenderal Soedirman. Rancangan percobaan yang digunakan yaitu Rancangan Acak Kelompok Lengkap (RAKL) pola faktorial dengan 2 faktor yaitu pemupukan dengan 2 taraf ( $P_0$ : kontrol,  $P_1$ : dipupuk) dan periode tercekam air dengan 4 taraf ( $T_0$ : kontrol yaitu diberi penyiraman normal,  $T_1$ : Perlakuan cekaman air selama 10 hari,  $T_2$ : Perlakuan cekaman air selama 20 hari,  $T_3$ : Perlakuan cekaman air selama 30 hari) sehingga terdapat 8 kombinasi. Setia perlakuan diulang 3 kali. Terdapat 24 unit percobaan dengan setiap unit percobaan terdiri dari 3 tanaman jeruk, sehingga diperlukan 72 tanaman sebagai materi percobaan. Variabel yang diamati yaitu waktu bunga pertama muncul, total bunga mekar, total bunga rontok, total buah rontok, jumlah daun,

jumlah tunas baru, *fruit set*, kandungan klorofil, kandungan N di daun, kandungan P di daun, kandungan K di daun, kandungan C- organik di daun, dan nisbah C/N Ratio. Hasil penelitian menunjukkan pemupukan (P1) terhadap tanaman jeruk memberikan pengaruh terbaik pada jumlah tunas baru sebesar 16,58%, jumlah daun 2,31%, total bunga muncul 4,85%, total bunga mekar 3,89%, total bunga rontok 4,23%, *fruit set* 2,31%, dan jumlah buah 1,83%. Perlakuan cekaman air selama 30 hari (T3) terhadap tanaman jeruk memberikan pengaruh terbaik pada total bunga muncul yaitu sebesar 5,33%, total bunga rontok 4,78%, *fruit set* 3,1%, dan jumlah buah 1,95%. Tidak terdapat interaksi antara pemupukan dan tercekam air untuk menginduksi pembungaan dan pembuahan pada tanaman jeruk.

Kata kunci: induksi bunga, induksi buah, jeruk, periode cekaman air, penambahan pupuk.



## SUMMARY

*Citrus is one of the fruit commodities that plays an important role whether in a world market or domestic market. It can be in the form of fresh fruit or processed fruit. In 2015, orange production in Indonesia reached approximately 2,40 million tons and keep increasing until 2019 with an estimated production of 2,77 million tons. The peak of orange harvest periode that occur at the same time, mostly make the price in this commodity decrease. Thus, there needs to be orange harvesting in off season to improve orange production and stabilize its price with aims to minimize the loss for farmers. One of the efforts to increase orange production or stabilize its price in the market is by using cultivation techniques with stimulating orange flowering in off season by performing water stress and fertilization. This research aims to (1) obtain the best water stress period for flower induction and orange plants fertilization, (2) find out the effect of the distribution of AB mix fertilizer to orange plants flowering and fertilization, and (3) find out the interaction between fertilization and water stress in orange plants. This study was conducted in January 2020 until Mei 2020 in screen house Agriculture Faculty, Universitas Jenderal Soedirman. Experimental design used in this research is Randomized Complete Block Design (RCBD) with factorial pattern involving 2 factors, which are fertilization with 2 stages ( $P_0$ : control,  $P_1$ : fertilized) and water stress period with 4 stages ( $T_0$ : control, i.e. given the normal way of watering,  $T_1$ : given water stress treatment for 10 days,  $T_2$ : given water stress treatment for 20 days,  $T_3$ : given water stress treatment for 30 days) until there are 8 combination. Every treatment is repeated for 3 times. There are 24 experimental units with every experimental unit consist of 3 citrus. Therefore, it takes 72 plants to be taken as experimental material. The variable observed was the time the first flower appeared, the total flowers that bloomed, the total fruits that fell, the amount of leaves, the amount of new shoots, fruit set, chlorophyll content, N content in leaves, P content in leaves, K content in leaves, C-*

*organic content in leaves, and C/N Ratio. The result shows that fertilization (P1) to citrus gave the best effect to the amount of new shoots with 16,58%, the amount of leaves with 2,31%, the total of flowers that appeared with 4,85%, the total of flowers that bloomed with 3,89%, the total of flowers that fell with 4,23%, fruit set with 2,31%, and the amount of fruits with 1,83%. Water stress treatment for 30 days (T3) to citrus gave the best effect to the total flowers that appeared with 5,33%, the total flowers that fell with 4,78%, fruit set with 3,1%, and the amount of fruits with 1,95%. There is no interaction between fertilization and water stress for flower and fertilization induction in orange plants.*

*Keywords: flower induction, fruit induction, orange, water stress period, fertilizer addition*

