

RINGKASAN

Tembakau (*Nicotiana tabacum* L.) merupakan salah satu komoditas perdagangan penting di dunia termasuk Indonesia. Salah satu upaya untuk mendapatkan bibit bermutu yaitu dengan cara menerapkan sistem semai polibag dengan terobosan perbedaan umur pemindahan semaian ke polibag. Ketersediaan nutrisi bibit dapat ditingkatkan dengan cara pemberian pupuk daun gandasil D dan juga pemanfaatan mikoriza. Penelitian ini bertujuan untuk; 1) mengetahui pengaruh umur pindah semaian ke polibag terhadap pertumbuhan dan ketahanan bibit tanaman tembakau, 2) mengkaji jenis pupuk terbaik terhadap pertumbuhan dan ketahanan bibit tanaman tembakau, 3) mengetahui pengaruh interaksi antara umur pindah semaian ke polibag dengan berbagai macam jenis pupuk terhadap pertumbuhan bibit tembakau dan ketahanan hidup di lapangan.

Penelitian ini dilaksanakan dari bulan April-Juni 2017 di *screen house*, laboratorium, dan lahan pertanian. Rancangan percobaan yang digunakan adalah Rancangan Acak Kelompok (RAK), dengan dua faktor. Faktor pertama adalah umur pindah semaian ke polibag yaitu 10 hari (S1); 15 hari (S2); 20 hari (kontrol) (S3) setelah berkecambah. Faktor kedua adalah jenis pupuk yang meliputi NPK (kontrol) (P1); NPK dan gandasil D (P2); NPK dan mikoriza (P3); NPK, gandasil D, dan mikoriza (P4). Variabel pengamatan di pembibitan meliputi: tinggi tanaman, jumlah daun, luas daun, diameter batang, bobot basah akar, bobot kering akar, bobot basah tajuk, bobot kering tajuk, serta pengamatan umur 1 bulan dilapangan meliputi: persentase tanaman tidak roboh, persentase tanaman mati, diameter batang, tinggi tanaman, jumlah daun, bobot kering akar, dan bobot kering tajuk.

Hasil penelitian menunjukkan bahwa 1) Umur pindah semaian berpengaruh terhadap pertumbuhan bibit tembakau. Umur pindah semaian terbaik adalah 10 hari meningkatkan pertumbuhan dibanding umur 20 hari (kontrol) sebesar 11,78% (tinggi tanaman), 9,6% (jumlah daun), 37,23% (luas daun), 18,18% (diameter batang), dan 41,18% (bobot kering tajuk). 2) Jenis pupuk berpengaruh terhadap luas daun dan persentase tanaman mati. Jenis pupuk terbaik pada NPK, gandasil D, dan mikoriza berpengaruh pada variabel luas daun memberikan kenaikan terhadap kontrol sebesar 25,83% dan menurunkan persentase tanaman mati umur satu bulan di lapangan 19,45%. 3) Interaksi perlakuan umur pindah semaian dan jenis pupuk terbaik pada variabel tinggi tanaman adalah umur pindah semaian 10 hari dengan jenis pupuk NPK dan gandasil D, pupuk NPK dan mikoriza, serta pupuk NPK, gandasil D, dan mikoriza memberikan kenaikan 21,29% dibanding pindah semaian 20 hari (kontrol) dengan jenis pupuk NPK (kontrol).

SUMMARY

Tobacco (Nicotiana tabacum L.) is one of the important trading commodity in the world including Indonesian. The problem of tobacco culture at farmers level are a low seedling quality and bacterial wilt disease in the field. One of the efforts to get good quality seed is by implementing young transplanting seedling in to polybags and grown in the field at 30 days old. The other breakthrough is improving plant nutrients availability by addition of leaves fertilizer (gandasil D) and the utilization of mycorrhiza. This research aimed to: 1) know the effect of seedling transplanting age into polybags on the growth and resilience of tobacco plants, 2) find out the best types of fertilizer on the growth and resilience of seeds of tobacco plants, 3) to know the effect of interaction between seedling transplanting age into polybags with various kinds of fertilizer types on the growth of tobacco seedlings and field survival.

This research was conducted from April to June 2017 at screen house, laboratory, and farmland. The experimental design used was Randomized Completely Block Design (RCBD) with two factors. First factor was ages of seedlings transplanting into polybags: 10 days (S1); 15 days (S2); 20 days after germination (S3 as control). Second factor was type of fertilizer: NPK (control) (P1); NPK and gandasil D (P2); NPK and mycorrhiza (P3); NPK, gandasil D, and mycorrhiza (P4). Observed variables were: plant height, leaf number, leaf area, stem diameter, root wet weight, root dry weight, canopy wet weight and dry weight of crown, as well as observation age one month tobacco in field include: percentage of plants did not collapse, percentage of dead plants, stem diameter, plant height, laef number, root dry weight, and canopy dry weight.

*The results showed that 1) Transplanting age of seedlings affected the growth of tobacco plant seed. The best transplanting age was 10 days after germination, increased the growth up to 11,78% (on plant height), 9,6% (leaf number), 37,23% (leaf area), 18,18% (stem diameter), and 19,45% (the dry weight of canopy) compared with 20 days (control) after germination; 2) The type of fertilizers affected on variables the leaf area and percentage of dead plants caused by *Ralstonia solanaceae*. The largest leaf area was achieved by NPK, gandasil D, and mycorrhiza increased 25,83% compared with NPK (control) and the lowest percentage of dead plants was achieved by NPK and mycorrhiza decreased by 19,45% compared with NPK (control); 3) The interaction of the transplanting age of seedlings and types of fertilizer gave best plant height at 10 days transplanting seedling and fertilized with NPK and Gandasil D, or NPK and mycorrhiza, or NPK, Gandasil D, and mycorrhiza, increased plant height up to 21.29% compared with 20 days transplanting seedling with NPK fertilizer (control).*