

Decha Wongtanet 2007: Effect of Rootstocks on Growth of Peaches on the Highland of Northern Thailand. Master of Science (Agriculture), Major Field: Horticulture, Department of Horticulture. Thesis Advisor: Associate Professor Unaroj Boonprakob, Ph.D. 145 pages.

A peach rootstock in Thailand has been relied on only 'local clones' introduced from Southern China. Presently, new improved rootstocks being used elsewhere could adapt to Thailand climate. The objective was to evaluate influence of 'Local Khunwang', 'White Angkhang', 'Red Angkhang', 'Coastal Peach', 'Flordaguard', 'In Je Taur', 'Kuu Taur', 'Okinawa' and 'Premeir', as rootstocks on growth of 'TropicBeauty', TX2293-3 and TXW1491-1 as scions. Trees were planted at Angkhang Royal Agricultural Station (AK) and Chiang Mai Royal Agricultural Research Center (KW). For growth evaluation, scion height, number of flower and leaf buds, pruned branch weight, trunk cross sectional area, mineral concentration (N, P, K) and yield were measured along with chemical properties of soil (pH and mineral concentration). It was found that soil of both sites were clay and mineral concentration were sufficient to peach growth. KW soil pH was 5.29 – 6.12 and AK was 4.68 – 5.94. Significant differences were only observed in total non-structural carbohydrate (TNC) at KW and scion height, branch weight, trunk size, number of flower buds and yield at AK. TNC was the largest on 'Local Khunwang' (37.43 mg D-glucose / g-DW). Scion height was the greatest on 'Coastal Peach' (2.22 m.); while, branch weight, trunk size, number of flower buds and yield were the highest on 'Okinawa' (1.45 kg, 59.56 cm², 17 buds and 7.99 kg). There was no incompatibility observed among rootstock and scion varieties in early ages. In summary, 'Okinawa' had the highest growth and good scion performance as compared to other rootstocks.

Decha Wongtanet

Student's signature

Unroj Boonprakob

Thesis Advisor's signature

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