

Effects of sulfur on peanut chlorosis caused by iron deficiency and its difference among varieties¹

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summary

Iron deficiency of peanut has been commonly occurred in Hualien area, especially in calcareous soil. Leaf chlorosis might inhibit photosynthetic rate, retard growth and lower yield capacity of peanut. In order to determine the effects of strains and banding sulfur on reducing incidence of leaf chlorosis of peanut, experiment was performed in Feng-Lin town, Hualien prefecture. Treatments consist of sulfur banding with three varieties of TNS 9, TN10 and TN11. The results showed that TNS 9 was the most sensitive to leaf chlorosis among three tested varieties. Sulfur treatment yielded beyond non-sulfur for all three tested varieties of TNS9 , TN10, TN11. Leaf color of each variety was turned green due to banding sulfur and the effects were highly significant difference, especially for TNS 9, which leaf chlorosis was most quickly recovered with sulfur. The yield of TNS9(1,090 kg/ha) was the highest in the poor, sandy soil, and that of TN11(1,716 kg/ha) was the highest in the rich, sandless soil among three peanut varieties. Sulfur banding could increase yield capacity of peanut compared to non-sulfur, especially for TN10. Yield increments were by 61.8-88.3% in the heavy soil, and those were by 10.9-25.0% in the light soil for iron-deficiency area.

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