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Effects of growing degree days on growth and yield of maize depending on the sowing date

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Abstract

Total 15 different corn hybrids, Kwangpyeongok, Gangdaok, Yanganok, Singwangok, Jangdaok, Cheonganok, Cheongdaok, Andaok, Dapyeongok, Pyeongkangok, Pyeonganok, Daanok, Sunwon P3394, Gangilok, P3394, had been used to investigate the plant growth and yield of corn hybrids depends on the sowing date. Sowing dates were April 5th, June 25th, and July 5th and all experiments had three repeats. The growth of Gangdaok was the best. However, in the case of Kwangpyeongok, the growth was not the best to compare with Gangdaok, but the stem to ear height ratio was lower than Gangdaok, it may be better for the stable cultivation. Both of the growth and yield of Daanok was not good regardless of planting date, but the yield and ear shape of Pyeongkangok and Dapyeongok were good for fresh corn. The growth and yield of 15 different corn hybrids were variable depends on the planting date, however, the growth degree days (GDD) was the most important factor for the maturity of the corn. More than 1500°C of GDD was enough to harvest mature corn hybrids in the central region of Korea. Besides the yield and growth, other characters such as sweetness and taste as a food should be investigated further for the fresh corn to be suggested.

Key words: planting date, GDD, corn

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