Breeding of an early maturing silage maize cultivar, 'Tachipirika', with resistance to lodging and northern corn leaf blight

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Summary

A new silage maize cultivar, 'Tachipirika', was developed and registered as 'Maize Norin Kou 67' by the Japanese Ministry of Agriculture, Forestry and Fisheries in 2010.

'Tachipirika' is a single-cross hybrid having two flint inbred lines, Ho87 and Ho90, as the seed and pollen parent, respectively, and was selected in field tests at nine locations throughout Hokkaido including NARO Hokkaido Agricul. Res. Center and Konsen Agric. Exp. Stn.. 'Tachipirika' is classified into the extremely early maturity group and is adapted to Konsen and Douhoku areas in Hokkaido, Japan. Its silking date is mostly the same as that of 'Ema' and one day later than that of 'Papirika'. Whole plant dry matter content and ear content of 'Tachipirika' are greater than those of 'Ema' and almost the same as those of 'Papirika'. The

average yield for whole plant dry matter of 'Tachipirika' is mostly the same as those of 'Ema', and 'Papirika'. 'Tachipirika' was found in field tests to have a higher lodging resistance than those of 'Ema' and 'Papirika'. 'Tachipirika' is highly resistant to northern corn leaf blight (Setosphaeria turcica), the most important disease of silage maize in Hokkaido, and its resistance level is higher than those of 'Ema' and 'Papirika'. 'Tachipirika' shows a level of resistance to common smut (Ustilago maydis) equivalent to those of 'Ema' and 'Papirika'. Cold tolerance of 'Tachipirika' is higher than that of 'Ema' but slightly lower than that of 'Papirika'. The adaptability of 'Tachipirika' to higher planting density is greater than that of 'Ema' and 'Papirika'. Suitable planting density of 'Tachipirika' is 850 - 920 plants per are.

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