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Source: [Maize | Land & Water | Food and Agriculture Organization of the United Nations | Land & Water | Food and Agriculture Organization of the United Nations \(fao.org\)](#)

Watch out for:

- Fall Armyworm. It is important to monitor your crop frequently after germination for signs of the FAW because early detection can lead to early management which may help to keep yield losses low unlike when high pest infestations occur.

Maize (*Zea Mays*) originates in the Andean region of Central America. It is one of the most important cereals for human and animal consumption and is grown for grain and forage. Present world production is about 594 million tons of grain from about 139 million ha (FAOSTAT, 2000).

The crop is grown in climates ranging from temperate to tropic when the mean daily temperatures are above 15°C and frost-free. The adaptability of varieties in different climates varies widely. Successful cultivation markedly depends on the right choice of varieties so that the growing period matches the growing season's length and the purpose for which the crop will be grown. Variety selection trials are frequently necessary to identify the best suitable varieties for given areas.

When mean daily temperatures during the growing season are greater than 20°C, early grain varieties take 80 to 110 days, and medium varieties 110 to 140 days to mature. These varieties are 15 to 20 days shorter when grown as a vegetable. When mean daily temperatures are below 20°C, there is an extension in days to maturity of 10 to 20 days for each 0.5°C decrease depending on variety, and at 1.5°C, the maize grain crop takes 200 to 300 days to mature. With a mean daily temperature of 10 to 15°C, maize is mostly grown as a forage crop because of the problem of seed set and grain maturity under cool conditions. For germination, the lowest mean daily temperature is about 10°C, with 18 to 20°C being optimum. The crop is very sensitive to frost, particularly in the seedling stage, but it tolerates hot and dry atmospheric conditions so long as sufficient water is available to the plant and temperatures are below 45°C. Temperature requirements, expressed as the sum of mean daily temperatures for medium varieties, are 2500 to 3000 degree days, while early varieties require about 1800 and late varieties 3700 or more degree days.

Concerning day length, maize is either a day-neutral or a short-day plant. The growth of maize is very responsive to radiation. However, five or six leaves near and above the cob are the source of assimilation for grain filling, and light must penetrate these leaves. For optimum light interception, for grain

production, the density index (number of plants per ha/row spacing) varies, but on average, it is about 150 for the large late varieties and about 500 for the small early varieties. Sowing methods and spacing vary, and fertility and water are decisive factors in choosing the optimum density in relation to light interception and highest yields. Plant population varies from 20000 to 30000 plants per ha for the large late varieties to 50000 to 80000 for small early varieties. Spacing between rows varies between 0.6 and 1 m. Sowing depth is 5 to 7 cm, with one or more seeds per sowing point. When grown for forage, the plant population is 50 percent higher.

The plant does well on most soils but less on heavy, dense clay and sandy soils. The soil should preferably be well-aerated and well-drained, as the crop is susceptible to waterlogging. The fertility demands grain maize are relatively high, and for high-producing varieties, up to about 200 kg/ha N, 50 to 80 kg/ha P, and 60 to 100 kg/ha K. Generally, the crop can be grown continuously if soil fertility is maintained.

Maize is moderately sensitive to salinity. Yield decrease under increasing soil salinity is: 0% at ECe 1.7 mmhos/cm, 10% at 2.5, 25% at 3.8, 50% at 5.9, and 100% at ECe 10 mmhos/cm.