

Integrated nutrient management in maize

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The literature on integrated nutrient management in maize crop has been well documented. In this article efforts have been made to review the literature available on integrated nutrient management in corn. The effect of integrated nutrient management on growth character, yield attributes, yield, nutrients uptake, quality characters and economics were presented here.

Today, for the country of India's dimension, with no scope for horizontal expansion and complexity of problems and challenges, there is no alternative but continue to improve productivity without further degrading its natural resources that too in a sustainable manner (Narayanswamy *et al.*, 1994). In this contest we will have to adopt a rationalist organic farming approach to have an 'Evergreen Revolution'. This has led to the concept of integrated nutrient management (INM) gain momentum in recent years to improve and maintain the soil health. Besides this, with escalating cost of energy based fertilizer material, limited fossil fuels, INM approach combines the use of organic sources along with fertilizers, which would be remunerative for getting higher yields with considerable fertilizer economy (Subbian and Palaniappan, 1992)

Growth character:

Madhavi *et al.* (1995) conducted a trial on integrated nutrient management for maize and observed that maximum plant height was recorded with the combination of 4.5 t poultry manure and 100% RDF, which was at par with 3.0 t poultry manure and 100% RDF combination, both these treatment combinations were significantly superior over rest of the treatment combinations.

Kumar *et al.* (2002) observed that application of 150% RDF and 100% RDF + 10 t FYM/ha showed nearly equal plant height, which was higher than 50% RDF + 10 t FYM and RDF alone treatments.

Wagh (2002) from a field trial conducted at College of Agriculture, Pune on sweet corn reported that all the growth characters *viz.*, plant height, number of functional

leaves, leaf area and total dry matter production were found significantly more with application of 100 per cent RDF(225:50:50 Kg NPK per ha) + 5 tone FYM per ha + Azatobactor + PSB than other fertilizer and FYM levels.

Luikham *et al.* (2003) conducted a trial on baby corn to study the effect of organic and inorganic nitrogen at Coimbatore and the data showed that maximum plant height was recorded with 100% dose of N + 10 t FYM/ha, which was at par with 75% dose of N + 10 t FYM/ha and both these treatments were significantly superior over control. The maximum dry matter production (g/m^2) was recorded with 100% N + FYM 10 t/ha, which was significantly superior over rest of the treatments, which included FYM.

Rana and Shivran (2003) reported from a field trial carried out on maize at Indian Agriculture Research Institute, New Delhi that dry matter production and leaf area index significantly improved under FYM @ 5 tone per ha with dust mulch or straw mulch as compared to no mulch, FYM @ 5 tone per ha, Dust mulch, straw mulch, kavoline + dust mulch and straw mulch alone.

Karki *et al.* (2005) conducted an experiment at Indian Agricultural Research Institute, New Delhi on maize and reported that application of 120 kg N + 10 t FYM per ha produced significantly higher plant height and dry matter production per plant over rest of treatment combination.

Kumar *et al.* (2005) conducted an experiment at Indian Agricultural Research Institute, New Delhi on maize and reported that application of 120 kg N + 26.2 kg P_2O_5 + 33.2 kg K_2O per ha combining with 10 t FYM per ha yielded significantly higher plant height and leaf area index over rest of treatment combination.

Gosavi (2006) after conducting the field trial at Aspee foundation, Thane on sweet corn reported that the plant height and growth at all the growth stages was influenced significantly due to polythene mulches with the combination of 20 t FYM ha^{-1} over rest of the treatment combination.

Gosavi (2006) after conducting the field trial at Aspee

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