



Research Paper

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Effect of double and single row system of planting on growth and yield of pineapple [*Ananas comosus* (L.) Merr] cv. KEW

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ABSTRACT : The study entitled, effect of double and single row system of planting on the growth and yield of pineapple [*Ananas comosus* (L.) Merr] cv. KEW was conducted at Horticultural Research Farm (HRF), CAU, Andro, Imphal East during 2007-2009. In the experiment six treatments with different spacing of 100x100cm, 75x75cm, 50x50cm, 25x50x80cm, 30x55x90cm and 35x60x100cm were used. Observations on leaf length and width, leaf size index, leaf area index, fruit weight with and without crown, fruit length and diameter, fruit yield were recorded at different intervals from 8 months after planting (MAP), 12 MAP, 16 MAP and 20 MAP. Growth parameters increased gradually upto 16 to 18 months after planting. Leaf length and width, leaf size index and leaf area index were maximum with wider spacing *i.e.* with 100x100cm spacing which was closely followed by planting at spacing 75x75cm. The spacing 100x100cm recorded maximum fruit weight with and without crown with 1.59kg and 1.31 kg and maximum fruit length and diameter with 15.50cm and 11.67cm, respectively. However, the spacing 25 x 50 x 80 cm recorded maximum fruit yield with and with crown in with 45.23t/ha and 38.77t/ha, respectively. Fruit weight slightly decreased with increase in plant population, however, total yield/h increased significantly.

KEY WORDS : Double row system, Single row system, Pineapple

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Pineapple [*Ananas comosus* (L.) Merr.] family Bromeliaceae is one of the most important commercial fruit crops of N.E. region of India. Pineapple is highly valued because of its excellence in canning and other processing industries for the production of nutritious and value added products like juice, jam, jelly, candy, canned pineapple squash etc. and is good source of vitamin A, B and is rich C and calcium.

There is ample prospect for extension of pineapple cultivation in Manipur because of more available area in the foot hills and ideal agro-climatic conditions prevailing in the state. Cultivation of pineapple gain importance as it generates income and employment to a sizeable section of population in the state. As many canning industries were established recently, the demand and importance of this crop had also increased. According to Sen (1990), Manipur

ranks second after West Bengal in the production of pineapple in India with total production of 11,280 tonnes out of an area of 7,780 hectares. The average yield is about 14.5 t/ha which is too low in terms of per hectares yield when compared with leading producing centre like Hawaii where an average production is at the rate of 60 t/ha. High density planting not only increase yield per unit area but can result in the overlapping of leaves which will form a sort of natural mulch, thereby preventing moisture losses due to evaporation and also help in reducing the incidence of weed. In this region where 20 to 25 per cent of the fruits develop sun burn in the absence of adequate shade, the higher planting density can also induce the vigorously growing leaves to grow upright and thus give a natural protection to the fruits.