

Product / Produkt:

Penergetic-p

**User / Anwender:**West –East GmbH
D-Much**User Application Report****Date / Datum:**

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Evaluation of Penergetic-p in coffee nursery

A nursery trail was conducted at CCRI during the year 2006 in RBD with five treatments and four replications to study the effect of Penergetic-p treatments on growth and vigour of coffee seedlings. Seed of Arabica and Robusta coffee were treated with different doses of Penergetic-p formulation and sown in the polythene bags. In one of the treatments, the Penergetic-p formulation was used as foliar spray. Treatment details are furnished below:

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|-----|---|--|
| T 1 | - | Control – no Penergetic-p |
| T2 | - | Treatment of seed with Penergetic-p at 20 g / kg of seed |
| T3 | - | Treatment of seed with Penergetic-p at 30 g / kg of seed |
| T4 | - | Treatment of seed with Penergetic-p at 40 g / kg of seed |
| T5 | - | Spraying of coffee seedlings (fortnightly)
with Penergetic-p at 60 g / 100 lt. of water |

Observations on growth parameter viz., plant height (cm), stem girth (mm), length of tap root (cm), number of leaves / plant and leaf area (cm²) were recorded in the seedling at the interval of 60 days.

Observations on growth parameters

Spraying with Penergetic-p formulation at 60 g / 100 lt. water at fortnightly intervals (T5) significantly increased plant height (cm), tap root length (cm), number of leaves, stem girth (mm), total plant biomass (g) and leaf area (cm²) in the Arabica seedlings (28.5, 20.50, 14, 5.25, 4.60, and 29.64 respectively) and this treatment was on par with the seedlings treated with Penergetic-p at the rate of 40 g / kg of seed (T4) (28, 20, 14, 5.2, 4.56 and 28.18 respectively) when compared to the seedling without any treatment – control (26.5, 18.5, 12, 4.8, 3.38 and 21.96 respectively) at 150 days after sowing the seeds in the polythene bags (Table 1).

The same trend was noticed in Robusta seedlings (Table 2). However, this trail has to be repeated for the next season of conclusion.

Table 1: Observations on growth parameters in Arabica coffee seedling (150 days after transplanting)

Treatment	Plant height cm	Tap root length cm	Number of leaves	Stem girth mm	Total plant biomass in g	Leaf area cm ²
T1	26.50	18.50	12.00	4.50	3.381	21.96
T2	27.00	18.50	12.00	4.75	3.530	21.98
T3	27.00	18.50	12.00	4.85	3.595	22.67
T4	28.00	20.00	14.00	5.20	4.560	28.18
T5	28.50	20.50	14.00	5.25	4.600	29.64
CD at 5 %	0.54	0.52	1.17	0.39	0.998	1.97

Table 2: Observations on growth parameters in Robusta coffee seedling (150 days after transplanting)

Treatment	Plant height cm	Tap root length cm	Number of leaves	Stem girth mm	Total plant biomass g.	Leaf area cm ²
T1	18.50	16.50	12.00	4.40	2.820	21.34
T2	18.50	18.00	12.00	4.70	2.831	22.62
T3	18.50	18.00	12.00	4.80	2.861	23.37
T4	19.00	19.50	14.00	4.95	3.508	26.03
T5	19.50	19.50	14.00	5.10	3.694	27.93
CD at 5 %	0.50	.046	1.48	0.35	0.781	1.95