

**UNIVERSITY OF AGRICULTURAL SCIENCES,  
DHARWAD**

**RESEARCH REPORT OF TESTING CHEMICALS**

**EVALUATION OF *SPURT* ON GROWTH  
AND YIELD OF CHILLIES**

**PERIOD FROM 2001-02**

**AGRICULTURAL RESEARCH STATION, SANKESHWAR  
DIST:-BELGAUM (KARNATAKA)**

## EVALUATION OF *SPURT* ON GROWTH AND YIELD OF CHILLIES

1. Name of experiment : Evaluation of *SPURT* on growth and yield of chillies
2. Location and year (date) of conduct of experiment : Agricultural Research Station, Sankeshwar-591 314, Date: 18/06/2001
3. New or continued experiment : Continued
4. Details of experiment
  - a. Design : RBD
  - b. Replications : Three
  - c. Treatment details:
    1. T-1 Rootdip before transplanting @ 10 ml / 25 liter of water.
    2. T-2 1<sup>st</sup> spray before flowering @ 20 ml / 100 liter of water.
    3. T-3 2<sup>nd</sup> spray after small fruits are formed @ 40 ml / 100 liter of water.
    4. T-4 Spray at 15 day intervals till crop persists as in T-3.
    5. T-5 Spray monocrotophos @ 1 ml / liter of water + dicofol @ 2 ml / liter of water.
    6. T-6 Water spray.
    7. T-7 Control (check).
5. Observations recorded:
  - a. No. of branches/plant at harvest.
  - b. No. of fruits/plant at each stage of the crop.
  - c. Green chilli yield/ha.
  - d. Percent murda incidence.

## EVALUATION OF *SPURT* ON GROWTH AND YIELD OF CHILLIES

### INTRODUCTION

This trial was conducted to see the benefits of commercially available biostimulant *SPURT* (sea weed extract along with amino acid) on green chilli yield at Agricultural Research Station, Sankeshwar during kharif-2000. This *SPURT* chemical contains auxins, cytokinin, purine, pyrimidine, nucleotides and natural phyto hormonal action substances along with sea weed extract 12.5% W/V and total nitrogen 2.2 to 3.2% with pH 5-6. So, the effect of this *SPURT* was studied on growth and yield parameters, as well as murda incidence. The experiment was conducted as per the protocol given by the company and results obtained as given below.

### GROWTH AND YIELD PARAMETERS

Application of *SPURT* used either as root dip of seedlings or sprayed at various stages of chilli growth ranging from 10 to 40 ml affected the height significantly. In the treatment T-4 where *SPURT* was sprayed at 15 day intervals till the crop is persisted has attained significantly higher height (96.67 cm) of plant followed by T-3 (88.33 cm) as compared to control (without any spray) (65.55 cm). Similar trend is followed in the number of branches per plants. The yield is the product of both growth and yield components. The green chilli yield was significantly influenced by the *SPURT* treatments. The green chilli yield recorded in T-4 is 100.62 Q/ha and it is on par with T-5 where Monocrotophos and Dicofol were sprayed @ 1 ml/L and 2 ml/L of water respectively (102.79 Q/ha) followed by T-1 (97.00 Q/ha), T-3 (91.40 Q/ha) and T-2 (90.62 Q/ha).

### INCIDENCE OF MURDA COMPLEX

Murda is a viral disease in chilli which is transmitted through both thrips and mites. The percent upward curling due to thrips was significantly lower in T-2 (2.80%) and followed by T-4 (2.94%) and T-5 (4.47%). Similarly the percent downward curling was lower in T-5 (4.85%) where the monocrotophos and dicofol sprayed @ 1 ml/L and 2 ml/L of water followed by T-4, T-2, T-1 and T-6 over control treatment (without any spray) (13.21%). Both percent downward and upward curling was significantly lower in T-4 (1.82%) followed by T-5 (1.85%), T-1 (2.05%), T-2 (2.35%), T-3 (2.44%) over control (12.34%).

### CONCLUSION

It can be concluded that the application of biostimulant *SPURT* delayed the occurrence of murda disease in chilli and resulted in higher green chilli yield.

**Table 1 – Evaluation of *SPURT* on Growth and Yield of Green Chillies during 2001-2002**

Treatments	Height of the plant (cm)	No. of Branches per Plant	Green Chilli Yield (Q/ha)	Upward Curling (%)	Downward Curling (%)	Both Upward & Downward Curling (%)
T-1 Root dip before transplanting @ 10 ml/25 L of water	67.18	2.57	97.00	9.89	5.16	2.05
T-2 1 <sup>st</sup> spray before flowering @ 20 ml/100 L of water	75.85	2.83	90.62	2.80	5.14	2.35
T-3 2 <sup>nd</sup> spray after small fruits are formed @ 40 ml/100 L of water	88.33	2.87	91.40	5.30	4.89	2.44
T-4 Spray at 15 days intervals till crop persist as in T-3	96.67	3.60	100.62	2.94	5.13	1.82
T-5 Spray monocrotophos @ 1 ml/L + dicofol @ 2 ml/L	88.18	2.67	102.79	4.47	4.85	1.85
T-6 Water spray	87.73	2.40	83.19	10.93	5.74	2.69
T-7 Control (check)	65.55	1.73	80.05	15.43	13.21	12.34
C.D. at 0.5%	2.21	0.23	2.91	0.96	0.78	0.82