*Short Communication*

# Effect of Dates of Planting on *Phytophthora* Leaf Blight and Yield of Colocasia

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Colocasia (*Colocasia esculenta*) is an important staple is affected by many fungal diseases of which *Phytophthora* leaf blight caused by *Phytophthora colocasiae* Raciborski is the most important therefore, the present study was carried out.

The field trials were conducted at Regional Centre of C.T.C.R.I., Bhubaneswar during *kharif* 1999, 2000 and 2001 using highly susceptible Cv. Telia at a spacing of 60 x 45 cm in plots of size 3.0 x 2.25 m with three replications. The planting started from 1st May to 15th July at an interval of 15 days. Disease severity was recorded on the basis of % leaf area affected. % plant infected and tuber yield were also recorded.

Pooled data of three successive years revealed (Fig. 1) that the maximum and minimum disease incidence and disease severity were observed in the crop planted on 1st May and 15th July, respectively. It was also reported that planting on 1st May resulted the highest tuber yield, followed by 15th May. Tuber yield on 1st May and 15th May was on par and significantly superior to other dates of planting. Hence, the crop could be grown early in between 1st May to 15th May. It was interesting to note that % plant infected and % disease severity were also higher in planting dates on 1st May and 15th May. More or less similar results were reported by Prajapati *et al.* (2006) who reported that late sown crop significantly reduced PDI. Singh and Singh (2004) observed that monsoon crop produced highest yield. Obviously, the crop planted on 1st May to 15th May was in the maturity stage at the time of infection of this disease whereas in other time of planting, the crop was still in the developing stage. Increase of crop yield was attributed to the

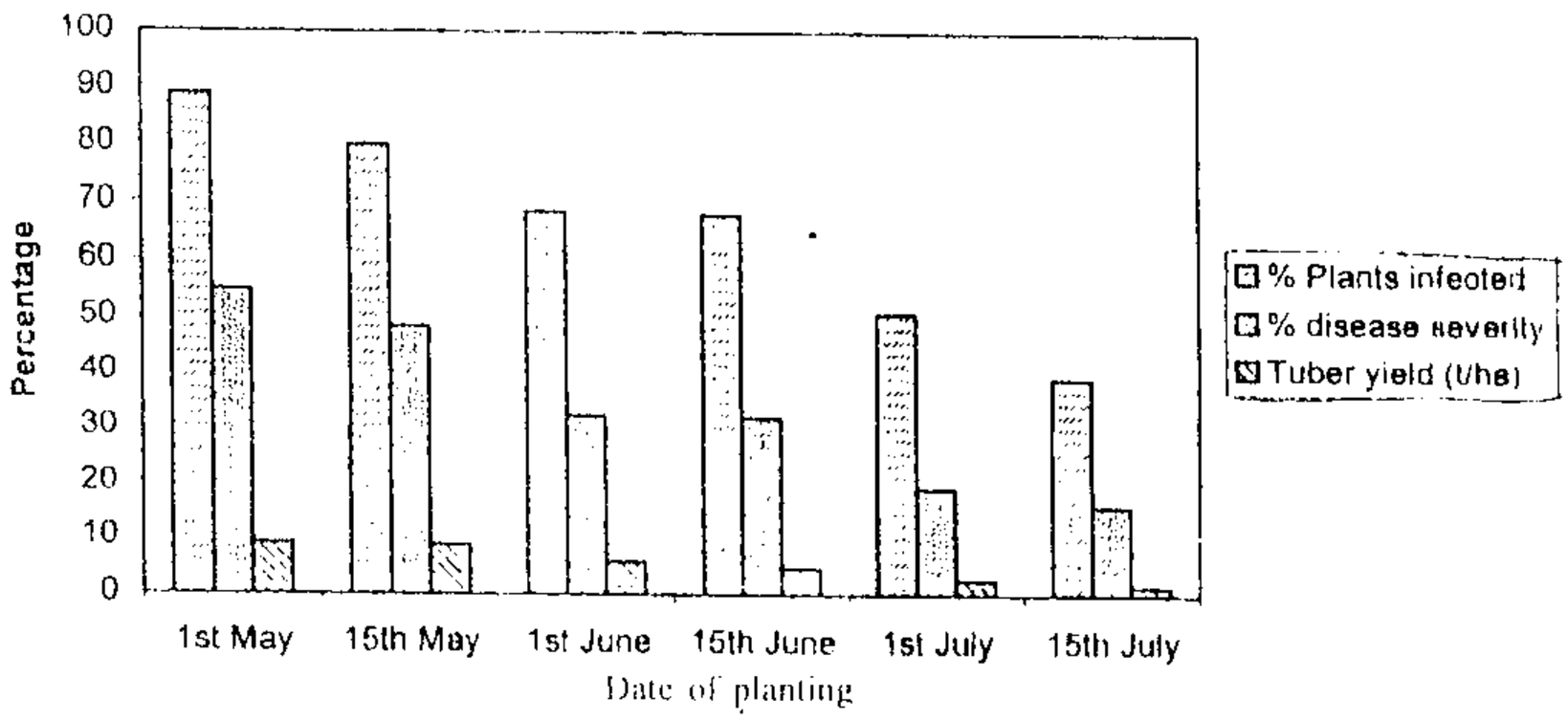


**Fig. 1.** Effect of dates of planting on *Phytophthora* leaf blight incidence, severity and tuber yield of Colocasia

control of disease as observed by Gupta *et al.* (2004).

## References

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# Germination of Conidia of *Ascochyta cypericola* causing Leaf Blight of *Cyperus rotundus* under Stress

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Effect of different factors or stresses on germination of spores was studied *in vitro* and the results are reported herein.

A fresh culture of *Ascochyta cypericola* was inoculated on P.D.A. in Petri plates and was incubated at 30±2°C in a light chamber providing 27.432-µE $m^{-2}$ $Sec^{-1}$ photon flux density at the surface of the plates. At about 18 days of incubation by when fully developed pycnidia were observed, these were picked and placed in a beaker and crushed with a glass rod by adding few ml of glass distilled water. The resultant was filtered through two layers of muslin. The filtrate containing spores was diluted with glass distilled water and centrifuged. To the spore pellet enough glass distilled water was added and disturbed by drawing many times with a syringe to free the spores. Then, it was centrifuged and the above process repeated. In this way the spores were washed 4 times. The washed spores were adjusted to different concentrations (Table 1) using a Thoma Haemocytometer to study spore germination versus spore concentration. About 0.1 ml of spore suspension was placed in each cavity of a cavity slide and replicated six times. The slides were placed in a Petri plate moist chamber and incubated at 30±2°C.

Table 1. Spore germination of *Ascochyta cypericola* at spore concentration and at pH levels

| Incubation (Hours) | % germination of spores at X $10^4$/mL spore conc. | | | | % germination of Spores at pH | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2.5 | 5.0 | 10.0 | 20.0 | 3 | 4 | 5 | 6 | 7 | 8 |
| 12 | - | - | - | - | 61 | 63 | 68 | 59 | 51 | 43 |
| 18 | 9.2 | 4.4 | 2.8 | 1.6 | 70 | 70 | 84 | 79 | 71 | 56 |
| 24 | 9.6 | 16.8 | 4.6 | 2.1 | 81 | 84 | 96 | 86 | 84 | 63 |
| 32 | 9.1 | 17.3 | 12.2 | 4.3 | - | - | - | - | - | - |
| 40 | 9.8 | 15.1 | 10.7 | 4.9 | - | - | - | - | - | - |

"-": Not applicable