Acidovorax avenae subsp. *avenae* associated with red stripe symptoms of sugarcane in Pakistan

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- *Acidovorax avenae* subsp. *avenae* associated with red stripe of sugarcane appeared on commercial and promising clones.
- An accurate and sensitive diagnostic method was required to identify disease free planting material.
- Serological tests developed for the detection of *A. avenae* subsp. *avenae*.
- DAC-ELISA was selected for indexing sugarcane clones for red stripe.



Red Stripe symptoms on sugarcane variety US-114



Red Stripe symptoms on sugarcane variety CSSG-2402

Preparation of Antibody

Antigen from the isolated bacterium was prepared according to the method as described by Somasegaran and Hoben (1994).

Two healthy albino rabbits 6-12 month-old were selected for immunization. Both were intravenously injected with antigen.



Artificial Inoculation

The experiment was conducted in RCBD at Shakarganj Sugar Research institute farm Kot Khan.

Inoculum suspension was prepared in sterilized water, having concentration of 5×10^7.

Inoculation was done into growing points at the plant age of 14 weeks.



Biochemical Characterization of Pathogen

- Gram staining (-)
- Oxidase activity (-)
- Catalase activity (+)
- Aesculin hydrolysis (-)
- Urease production (-)
- Indole production (-)
- H_2S production (+)
- Hydrolysis of starch (S)
- Arginine dihydrolysis (-)
- Acid production from carbohydrate (+)
- Carbon sources; Sucrose (-), Glucose (+)
- Gelatin utilization (-)
- Nitrate reduction (+)
- Fluores pigment (-)
- Citrate utilization (+)
- Tween 80 hydrolysis (+)


QUESTIONS ???
&
COMMENTS