Serologic Reaction of Virus Causing Mosaic of Cowpea

I wish to reply to the letter by Maurizio Conti in the June 1981 issue of PLANT DISEASE (page 459) in which he comments on the article "A Seedborne Potyvirus Causing Mosaic of Cowpea in India" by K. S. Kulthe and me. I am fully aware of the work of Dr. Conti and K. R. Bock on cowpea aphidborne mosaic virus (CAMV), but I could not make a reference to their work on CAMV in my article because the virus per se gave positive serologic reaction with bean yellow mosaic virus (BYMV), though it may be similar to CAMV in other properties. CAMV isolates reported from Africa, Australia, Iran, and Morocco give negative serologic reactions with BYMV antiserum.

Recently, we tested our virus preparation serologically with an antiserum of CAMV supplied by Dr. Bock in Kenya and G. Thottappilly in Nigeria. We found that our virus is not serologically related to CAMV. Our virus isolate is similar to blackeye cowpea mosaic virus (BECMV), but we have not tested it with an antiserum of BECMV. While testing serologic relationships with different isolates of cowpea seedborne mosaic virus, we found one isolate to be serologically related to CAMV.

We are now comparing CAMV and BYMV isolates with respect to serologic relationship, in vitro characteristics, particle dimensions, and transmission studies. The results will be published shortly after these studies are completed, and the work on CAMV and BECMV will be fully accounted.

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Pathogenicity: Coming to Terms with Another Term

Oscar H. Calvert may have "come to terms" with the words resistant and susceptible (PLANT DISEASE, Vol. 66, No. 9, page 760), but I question the way he uses the term pathogenicity. He speaks of "genes for high pathogenicity" and "genes for low pathogenicity"; unfortunately, such genes do not exist. Pathogenicity is not a relative term, ie, an organism is either pathogenic or it is not. The correct term in this case is virulence. For example, on the same host, pathogenic organisms or races are more *virulent* or less *virulent* than different organisms or races; or, a single pathogen is more *virulent* on one host than on another.

The problem is not solved by simply replacing the word pathogenicity with virulence. Pathogens do not contain specific genes for "high" or "low" virulence, but they do contain virulence genes. The relative expression of these genes is dependent on the host genotype.

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