

0247

TRANSMISSION OF AN INFECTIOUS AGENT RELATED WITH THE AFRICAN CASSAVA MOSAIC DISEASE TO CAPSICUM ANNUUM AND CAPSICUM FRUTESCENS. J. DUBERN, Virol. Lab. ORSTOM Abidjan Ivory Coast.

From African Mosaic diseased cassava plants, an infectious agent is transmitted by dodder and by whiteflies to *Capsicum annuum* and *Capsicum frutescens*. This agent is also transmissible from *Capsicum* to *Capsicum* by graft, by dodder and by whiteflies. Four weeks after the inoculation, new pepper leaves show a light vein greening. Then the next leaves exhibit a limb narrowing associated with distortion. All the buds are growing and a witches' broom phenomena is observed.

0248

SUSCEPTIBILITY OF CASSAVA TO LEAF SPOT DISEASE CAUSED BY *CERCOSPORA CARIBAEA* J.N.C. Maduewesi, University of Nigeria, Nsukka, Nigeria.

The susceptibility of two cassava cultivars "Congo" and "U-6" to leaf spot disease caused by *Cercospora caribaea* has been studied in naturally-infected fields at Nsukka, since 1970. Susceptibility was assessed from the mean number of leaf spot lesions per plant based on 40 plants randomly taken from each cassava field. The development of lesions in both cultivars was greatest during the wettest months (June - September) and least during the peak of the dry season (December - February). The number of lesions per leaf in both cultivars was greatest in the oldest leaves, and this number decreased progressively towards the shoot apex. Observations carried out in July 1972 on the extent of lesion development in both cultivars at five different ages, 7, 10, 13, 16 and 44 weeks, showed a direct relationship between the age of the plant and its susceptibility. The youngest plants were least susceptible. The cultivar "Congo" was generally more susceptible than the "U-6". The mean number of lesions per leaf (based on five oldest leaves per plant) found in "Congo" at the five different ages were 21.0, 32.2, 34.6, 35.8 and 50.0, respectively. The corresponding figures for "U-6" were 11.7, 22.8, 23.3, 25 and 50.0.

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# TENTATIVE PROGRAM

(Topics listed by subject matter area)

## Session 1. Wednesday, September 5, 1973

Opening Plenary Session of the International Society of Plant Pathologists, followed by a single All-Congress Symposium on two topics: Impact of Agricultural Development on Population Growth and Economic Progress; and the Role of Plant Pathology and the Plant Pathologist in Today's World.

## Session 2, Wednesday 1330 - September 5, 1973

### Symposia

- II. Comparative nematology
- III. Deterioration of fruits and vegetables; physiological aspects
- V. Disease problems in intensively managed forests, needle and canker diseases
- VIII. Genetic basis of pathogenic variation in nature
- XII. Plant virus genetics
- XVI. Economic and social consequences of plant disease losses
- XVIII. Cellular metabolism during pathogenesis
- XIX. Discovery and development of chemicals for disease control

## Session 3, Wednesday 1930 - September 5, 1973

### Symposia

- IX. Role of epidemiology in contemporary plant pathology
- XIII. Do we need a corps of professional "Plant Disease Advisors"?
- XVI. Methods for disease appraisal and crop loss assessment

### Colloquia

- II. Taxonomy; physiology; chemical control of nematodes
- III. Nonparasitic diseases of fruit and vegetables originating in the field
- VII. Nuclear and chromosomal morphology and behavior in fungal plant pathogens
- XIX. New chemical developments from industry

### Discussion Session

- XII. International working group on legume viruses

## Session 4, Thursday 0900 - September 6, 1973

### Symposia

- II. Species concept in nematology
- III. The influence of environmental practices and conditions on postharvest deterioration
- V. Diseases in intensively managed forests: blister rusts of white and Scots pines
- VIII. Gene function and regulation (I)
- XII. Plant virus replication.
- XV. The genus *Pseudomonas* (I)
- XVII. Assessment and importance of plant damage caused by seed and soil-borne root-infecting fungi
- XVIII. Regulatory metabolism during pathogenesis

### Colloquia

- XIX. Innovations for chemical disease control (I)

## Session 5, Thursday 1330 - September 6, 1973

### Symposia

- III. Postharvest deterioration due to harvesting, handling, and shipping practices
- V. Diseases in intensively managed forests: Fusiform, twists, Camanora rusts
- VII. Dormancy and germination of plant pathogens
- VIII. Gene function and regulation (II)
- IX. Mathematical analysis and modeling of epidemics

- XV. The genus *Pseudomonas* (II)

### Colloquia

- II. Ultrastructure of nematodes; culturing of nematodes; disease appraisal and losses due to nematodes
- XI. Tropical plant diseases
- XII. Current research in plant virology.
- XIX. Colloquium - Innovations for chemical disease control

## Session 6, Thursday 1930 - September 6, 1973

### Symposia

- IV. The natural occurrence and significance of mycotoxins
- XIII. Extension - Advisory work in today's world

### Colloquia

- III. Storage environment and the incidence of pathological storage disorders
- VII. Discussion on the genus *Phytophthora*
- IX. Comparative epidemiology
- XVII. Soil fungistasis and lysis
- XIX. Miscellaneous contributed topics

### Discussion Sessions

- VIII. Interorganismal transfer of nucleic acid in host-parasite systems
- XIV. The education and training of graduate students from areas with developing agriculture
- XVIII. Molecular bases of host-pathogen specificity

## Session 7, Friday 0900 - September 7, 1973

### Symposia

- III. Chemical and physical control methods in postharvest pathology
- V. Diseases in intensively managed forests: root rots
- XII. Host response to plant virus infection
- XV. Bacterial blight of rice (I)
- XVI. Losses from interaction of plant pathogens
- XVIII. Toxins as pathogenic agents
- XIX. Activity of systemic fungicides

## Session 8, Friday 1330 - September 7, 1973

### Symposia

- III. Chemical and physical control methods in postharvest pathology
- V. Diseases in intensively managed forests: poplar diseases and spike disease of *Santal*
- VII. Progress in classification of imperfect fungi
- IX. International dispersal of plant pathogens
- XV. Bacterial blight of rice (II)
- XVII. The root environment in relation to growth and survival of plant pathogens
- XIX. Use of systemic fungicides

### Discussion Sessions

- XII. Techniques for detection and culture of viruses
- XIII. Extension/Advisory problems
- XIV. Development and improvement of plant pathology teaching programs in countries with developing agricultural technology
- XVIII. Induced and acquired resistance to pathogens

## Session 9, Friday evening, Sept. 7. All-Congress Buffet Dinner

## Session 10, Monday 0900 - September 10, 1973

### Symposia

- III, IV. Mycotoxins and food storage (I)

- VI. Interactions of microorganisms during wood decay
- VII. Genetic basis of host reaction
- XII. Mycoplasma-like organisms from plants
- XV. Host resistance to bacterial infection
- XVII. Crop residues and soil amendments in relation to survival and control of root infecting fungi
- XVIII. Host cell wall alteration
- XIX. Physical aspects of fungicides

#### Colloquia

- II. Nematode survival; virus-nematode relationships; nematodes in forest pathology

#### Session 11, Monday 1330 - September 10, 1973

#### Symposia

- II. Nematode resistance in plants
- III, IV. Mycotoxins and food storage (II)
- VI. Degradation of wood by bacteria
- VIII. Population genetics of pathogens
- X. The effects of air pollutants on vegetation and air quality criteria
- XVII. Microbial antagonism as a mechanism of defense of the host against seed and soil-borne pathogens

#### Colloquia

- XII. Current research on mycoplasma-like organisms
- XV. Phytobacteriology
- XVIII. Short communications

#### Discussion Sessions

- XVII. The Fusaria

#### Session 12, Monday 1930 - September 10, 1973

#### Colloquia

- II. Cytogenetics; chemical control of nematodes; fungus-nematode interactions
- III, IV. Control of postharvest development of mycotoxins in specific agricultural crops
- X. Air pollutants as important plant pathogens in various countries
- XV. Phytobacteriology
- XVI. Modern systems and technology in crop and disease assessment
- XIX. Fungal resistance to systemic fungicides

#### Discussion Sessions

- IX. Ecological races of plant pathogens
- XI. Tropical plant diseases
- XIII. New and innovative extension methods

#### Session 13, Tuesday 0900 - September 11, 1973

#### Symposia

- IV. Toxic trichothecenes and related compounds
- VI. Decay of resistant wood
- XI (IX). Contrasting the role of climate, environment, and cultural practices in plant pathology in tropical areas to that in temperate zones
- XII. Virus-vector relationships
- XVII. Resistance of plants to root infecting fungi
- XVIII. Structural changes in diseased plants
- XIV. Biochemical aspects of fungicides

#### Colloquia

- X. Interactions between pollutants and of pollutants with other pathogens

#### Session 14, Tuesday 1330 - September 11, 1973

#### Symposia

- I. Impact of modernizing agriculture on plant disease problems in developing countries

- IV. Mycotoxins and reproductive disorders in man and animals

- V. Forest pathology in Russia

- VIII. Breeding for disease resistance: theory and methods (I)

- IX. Resource management for prevention of epidemics

- X. Physiological and biochemical effects of air pollutants on plants

- XV. The fireblight disease

- XVII. Elucidation and exploitation of naturally occurring biological control

#### Colloquia

- XII. Plant virus diseases - of specific crops

#### Discussion Session

- XVIII. Regulation of host metabolic pathways in fungal and bacterial caused diseases

#### Session 15, Tuesday 1930 - September 11, 1973

#### Colloquia

- IV. Stachybotrya toxin research; toxins from Penicillia; ergotism
- X. Techniques for field evaluation and diagnosis of air pollution damage to plants
- XIX. Environmental fate of compounds used for disease control

#### Discussion Sessions

- VI. Extension: An obligation of all wood products pathologists
- VIII. International problems in breeding plants with respect to disease control
- IX. Teaching epidemiology
- XII. General discussion of plant viruses: characterization and identification
- XV. Ecology of soft rot diseases
- XVI. Problems in appraising disease intensity and crop loss

#### Session 16, Wednesday 0900 - September 12, 1973

#### Symposia

- II. Ecological approach to nematode control
- IV. Analytical methods for mycotoxin detection
- VI. The enzymatic mechanisms of wood deterioration
- X. Biological control of air pollution and air pollution diseases
- XI. Contrasting problems in pathology of food crops grown under tropical and temperate climates
- XII. Advances in the control of plant viruses
- XVIII. Host factors and susceptibility
- XIX. Safe and responsible use of fungicides

#### Colloquia

- XV. Phytobacteriology (III)

#### Session 17, Wednesday 1330 - September 12, 1973

#### Symposia

- I. Approaches to improve plant pathology in developing countries
- IV. Mycotoxins: biosynthesis and mode of action
- V (XVI). Forest disease survey and damage appraisal.
- VIII. Breeding for resistance, theory and method (II)
- XIII. Looking ahead in extension/advisory work

#### Colloquia

- II. Nematode ecology; nematodes in tropical agriculture; host-parasite relations
- XVII. Interaction of soil fungicides and soil microflora and the integration of biological and chemical control

#### Discussion Sessions

- X. The economic and aesthetic effects of air pollution on plants and plant communities
- XVIII. Induction of sporulation in fungi