GENETICS SOCIETY OF AUSTRALIA

8TH ANNUAL GENERAL MEETING

UNIVERSITY OF ADELAIDE

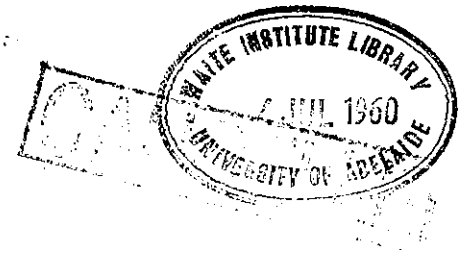
20-21 AUGUST 1959

PROGRAMME

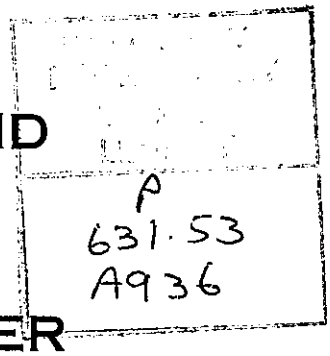
SCANNED FROM THE AUSTRALIAN

PLANT BREEDING AND GENETICS

NEWSLETTER NO. 15, 1960



THE AUSTRALASIAN PLANT BREEDING AND GENETICS NEWSLETTER



NUMBER 15

ISSUED EVERY SIX MONTHS

This finding is reported at this early stage as we now feel in a better position to explore the differences between varieties on a chemical basis. Many more tests must be done before this hope can be evaluated.

F. Morley.

Universities

Waite Agricultural Research Institute.

1. Leaf Meristems in Dactylis glomerata (Cocksfoot).

A study is being made of the leaf meristems of Dactylis glomerata in relation to leaf growth and summer dormancy. Preliminary results indicate that only the erect leaves of a tiller have a basal meristem; the mature leaves which are at an angle to the long axis of the tiller are incapable of further growth even when defoliated. When a plant is defoliated all the regrowth comes from further development of immature leaves. This growth is no more rapid nor is it slower than on a control undefoliated plant. The leaf growth of control and defoliated plants has been carefully followed under several intensities of defoliation without detecting any difference in the rate of growth of the immature leaves. Changes in leaf growth with repeated defoliations have not yet been followed. Tillering will also help in recovery from defoliation but its immediate effect on recovery will be slight.

In the strains of Dactylis studied so far the basal meristematic zones of the leaves in which mitotic divisions occur reaches a maximum length of 1 cm. This zone and the apical meristem of the tiller are below ground level during vegetative growth and should not be removed by a grazing animal unless the tiller is pulled out of the soil. At reproduction the apical meristem of the tiller rises above ground and may then suffer from grazing.

R. Knight.

Genetics Society of Australia.

1. Papers presented at the August, 1959, Meeting in Adelaide.

Sir Ronald Fisher - "The Darwin Centenary"

Prof. M.J.D.White & Miss Lesley E. Andrew - "Effects of chromosomal inversions on size in the Grasshopper Moraba scurra"

O. R. Byrne - "Inheritance of colour pattern variation in the locust, Chortoicetes terminifera"

Dr. P.A.Parsons - "Pleiotropy and competition at the Vermilion locus in Drosophila melanogaster"

Dr. W.B.Mather - "Chromosome Evolution in the immigrans group of Drosophila"

Dr. A.M.Clark - "Genetic effects of pyrollizidene alkaloids in Drosophila melanogaster"

Miss H.N. Turner - "Estimated and realised heritabilities and genetic correlations in an experimental flock of merino sheep"

P.G.Schinkel - "Estimates of genetic parameters of fleece characters in S.A. merino sheep"

Drs. F.E.Binet & J.A.Morris - "On total Hereditary Variance in the case of certain mating systems"

K. W. Shepherd - "An investigation of linkage relationships between genes for rust resistance in flax"

Dr. G.M.E. Mayo - "Use of artificial light for growing plant material in a controlled environment"

Prof. J.H.Bennett - An illustrated talk on "The genetical study of Kuru"

H.Daday and C.G. Greehham - "Combining ability for cold hardiness in Lucerne (Medicago sativa L.)"

S.S.Y. Young - "Relative Efficiencies of SelectionMethods"

Dr. P. Joranson (Institute of Paper Chemistry, Appleton, Wisconsin, U. S. A.) - "Forest tree improvement with special reference to the need of the pulp and paper industry"

Dr. P.G.Martin - "The relation of antibody formation to the structure of D. N. A."

Dr. B.W.Holloway & Miss M. Monk - "Transduction in Pseudomonas aeruginosa"

Mrs. M.J.Mayo - "Abortion patterns in asci of a strain of Neurospora crassa"

Dr. J.A.Pateman - "Further studies at the am locus in Neurospora crassa"

R. N. Oram - "Recombination frequencies in diploid and tetraploid maize"

B.T.O. Lee and J. A. Pateman - "Polygenic inheritance of ascospore size in Neurospora crassa"

C. K. Pawsey - "Heredity in relation to some disorders and defects of Pinus radiata (D. Don) in South Australia"

2. Forthcoming Meeting of the Society.

The C.S.I.R.O. Division of Animal Genetics is organizing the next meeting of the Society. It will be held on August 18 and 19, in the Zoology Department, University of Sydney, after the Radiation Biology meetings on August 15 and 16. Professor Dobzhansky will be present.

- NEWS AND NOTES -

1. Professor T. Dobzhansky is visiting Australia from March to September of this year as a Fulbright Research Scholar and Guggenheim Fellow. He will be carrying out research in the Department of Zoology of the University of Sydney on the evolutionary adaptations of Drosophila serrata over its climatic range from New Guinea to Central New South Wales. In addition, he will give a series of lectures in Sydney and, as well, in other University centres in Australia. While in Sydney, Professor Dobzhansky is also working on a book on human evolution.

2. Dr. R. E. Wright has joined the Division of Plant Industry, C.S.I.R.O. to undertake a programme of genetical work with Rhizobium. The major objective of this work will be the extension of the range of infectivity and efficiency of nitrogen fixation by Rhizobium. Before joining C.S.I.R.O., Dr. Wright worked under Professor Lederberg in Wisconsin and Professor Ephrussi in Paris. His previous research studies have been predominantly with yeast.

3. Dr. R. N. Oram of the Division of Plant Industry, C.S.I.R.O., now working on pasture grass improvement at the Agricultural Research Institute, Wagga, has been awarded the degree of Ph.D. by the University of Adelaide for his thesis, "The Genetics of Autotetraploid Maize".

4. Proceedings of the First International Wheat Genetics Symposium are now available. Copies may be obtained at the price of $5.00 each by submitting requests to Dr. B.C. Jenkins, Division of Plant Science, University of Manitoba, Winnipeg, Canada, and enclosing remittance made payable to the Comptroller, University of Manitoba.