

FEED FOR SHEEP

Nutritive Values Investigated

RESEARCH IN ADELAIDE

OF the scientific research work in hand in Australia today none is of more importance than that being conducted in Adelaide by the Council of Scientific and Industrial Research to ascertain the nutritive value of various foods for sheep and the requirements of the animal.

Sir Charles Martin, who is in charge of the investigation, said that the main objects are to learn more concerning the nutrition of animals and then to pass on the knowledge acquired to the pastoralist to apply.

"The fundamental purpose of the institute," he said, "is to study animal nutrition. We don't know all there is to be known about nutrition by any means. It is only in the past few years that our ignorance of much that is essential in the nutrition of the human species and in animals has been revealed by the discovery that not only fuel and material for building up the body and depositing fat and meat are necessary, but also minute quantities of all sorts of chemical materials, such as vitamins.

FEED DURING DROUGHT

"Sheep vary very much, like good dairy cows," said Sir Charles. "They have been selected by breeders to make wool, and if you can only give them the materials to do it a good sheep will give good wool. Even without good materials the sheep will go on producing good wool for some time as a good cow will put itself in the bucket.

"We find what sheep are capable of doing. Drought feeding is an economic problem, and we are obliged to find whether or not it is advisable to supplement the animal's food or whether the value of the wool obtained will be worth it at the cost of the value of supplementing. We are making the experiment quietly, measuring the wool growth from sheep when extreme starvation diet to those on extravagance. We may thus find what is too little and what is too much. In a year or two we may be able to say what feed should be supplemented for a few months at a minimum cost.

"There are various parts of the country where for some reason sheep do not thrive. Some may do fairly well for the first year only fairly in the second, and badly in the third. This also concerns us. It takes a long time to find out the reasons for all this—and this finding out has to be done quietly in the laboratories here, with small groups of sheep, to see if we can reproduce the trouble.

"If we can reproduce it we are in a position to suggest a remedy, and then see whether it is effective."

Sir Charles pointed out that many experiments on nutrition could be made on small animals, such as mice, rats, and rabbits; and that as a result of the growth obtained by them on various diets valuable information was collected.

This work has been helped by a gift from the Rural Reserve Fund of the Commonwealth Bank, and an annexe is in course of erection. Some of the special equipment necessary has been purchased, and the preliminary experiments are under way. The capital cost of the annexe will be £1,000. It will be possible to keep ten or more sheep there.

NO GUESS WORK

"At the Waite Institute," Sir Charles continued, "we can work with groups—and if we find something here and want to test it out in groups of 10 we go there where we have pens, a flock, and a laboratory. Again by arrangement with the pastoralists we experiment on a large scale on stations, with groups of 100 or 200—so you see we follow a sort of scientific method of progression. Without that we would be guess work, and flashing about and trying to find a remedy—a course that is generally wasteful!

Studies in drought feeding and phosphorus deficiencies are in progress. The sheep requires several types of food—rough materials and fats and proteins and minerals. Before an economic drought formula can be devised the minimum quantities, and the order in which they are necessary must be known; also, the quantities, and those materials in different drought feeders, such as silage, grain, and fodder bushes. These necessary elements vary in sheep of different breeds and ages, with different histories in regard to feeding. Then there is the fact that the particular variety of proteins fed is of great importance—for those differ considerably in their value to the sheep.

STAFF CONCERT AT CONSERVATORIUM One of Best Ever Heard

By Alex. Burnard

"One of the best ever heard in the Elder Hall," was the unanimous verdict after the concert by members of the Conservatorium staff last night. Leon Boellmann's romantic "Variations Symphoniques," for cello and orchestra, is a work we have not had from Mr. Harold Parsons for ten years. Let us hope that we will not wait another ten for this lovely "Rachael"! It opens with a declamatory subject that ever and anon reappears in varied treatment, but the floodgates of beauty open with the appearance of the second and major theme—one of the most effulgent melodies ever penned. Progressions and modulations, alive with the spirit of Boellmann's countryman, Franck, constantly occur, lifting the mind to an ecstatic state. Mr. Parsons's playing—particularly his command of tone—and Miss Puddy's playing of the Pf. transcription, were fully worthy of this great work. More cannot be said.

Mr. Harold Denton's beautifully produced baritone was first heard in the Bach aria "Mighty Lord and King" (Christmas Oratorio). His management of the long florid phrases, and of the tone-contrast in the calm middle section, was very effective. An old English group followed. In John Blow's "The Self-banished" his pianissimo was beautifully refined, and his robust quality shone forth in all its power in "I'll Sail Upon the 'Dog Star,'" of Purcell. He made both songs peculiarly his own.

Miss Sylvia Whittington and Mr. George Pearce were associated in the Dubois Violin and Pf. sonata in A major, an attractive abstract work. The first allegro, a perfectly ordered sequence of moods, maintained an exalted dignity; and the slow movement's intimate message, which the short agitato episode could not shake, was one of peace. The Allegro Deciso, turbulent and exciting, contained near the end some impassioned spans, before concluding on a note of triumph with quotations from the opening Allegro. The two artists played with their customary perfection of ensemble and understanding.

Miss Maude Puddy, in her Brahms bracket, rose to great heights of artistry. The A major Intermezzo had all its expressive reflectiveness lovingly exposed, and the B minor Capriccio was delightfully delicate. In six of the too-rarely-heard waltzes (from Op. 39) Miss Puddy surpassed herself. It was gorgeous playing, and the audience insisted on an encore. She gave us the lovely curves of "On Wings of Song."

At the end the audience revelled in the melodious charm of the famous Schubert Trio in B flat, the three players, Messrs. William Silver, Peter Bornstein, and Harold Parsons, combining in a truly marvellous balance and ensemble. This great Trio is certainly as fresh as when it was conceived, more than 100 years ago. Of the four movements, the first among equals was perhaps their consummate reading of the andante, although one has to mention also the humor and clarity of the finale, which was irresistible.

Adv. 16-9-31

Children's Examinations

From J. L. Cavanagh, Brompton:—Thousands of children will be debarred from taking part in the coming intermediate and leaving examinations unless the Education Department is prepared to remit the fees (amounting to over 30s) if the parents are in necessitous circumstances. The Minister of Education has done a lot for educational work in this State, and I hope he will make some arrangement so that children will not be penalised whose parents are unemployed.

Adv. 18-9-31

Mr. F. W. Wagner, South Australian Rhodes scholar in 1923, son of Mr. F. H. Wagner, North Adelaide, has decided to remain in England for a while to continue his studies and research. He has been appointed physics master and junior house master in Christ's Coats' school, Oxford. Reporting the result of Oxford University examinations, "The Times" says:—"In the list we find F. W. Wagner just missed gaining first class honors. He was placed one of the first from Christchurch in the second class honors list in philosophy, politics and economics (modern erata)." Mr. Wagner was awarded a first class honors degree, Adelaide University, in 1923.

From Our Special Correspondent Melbourne, September 16. Professor Wadham

There is concern in the agricultural community because the University is likely to lose the services of Professor Wadham, who is Dean of its Faculty of Agriculture. Professor Wadham has high academic qualifications and complete practical knowledge—two qualities which do not always go together. He has received an offer from England, and unless he can obtain a life tenure of his position at the University, he will feel impelled to accept it. Provision for the Government endowment of the School of Agriculture will expire in 1936, and, as the University is unable to say whether the Government will continue it, it is unable to give Professor Wadham any guarantee. Unless the Government acts, Professor Wadham will go. The State has already lost the services of two eminent agricultural scientists—Professor Richardson, who went to South Australia to become director of the Waite Institute, and Mr. Hugh Pye, the wheat expert, who has been retired for reasons of economy. Many people believe that if a wheat-growing State such as Victoria loses Professor Wadham as well, it will not only be hampering but endangering its primary production.