

cooled at the centre to simulate the temperature gradient between the pole and the equator, and the patterns that are revealed by a suspended indicator such as aluminium powder can often resemble the familiar shapes of the weather map. There are, for example, disturbances which resemble cyclones and fronts—a fact which implies that the condensation of water vapour is not one of the most important factors controlling the occurrence of these phenomena in the atmosphere. If the heat source is moved around the circumference of the pan, the daily cycle of solar heating can be simulated, and the ensuing motions are likely to be helpful in understanding how the atmospheres of other planets behave. Even the apparent shearing motion at the edges of the Great Red Spot of Jupiter seems to have its parallels in the model.

ANTIBIOTICS

Swann Implemented

THE British Government is to enforce from next March the classification of antibiotics into feed antibiotics, which can be mixed with animal foods to promote better growth, and therapeutic antibiotics, which cannot be given to animals without a veterinary surgeon's prescription. This separation was the chief method for reducing the risk of transferring resistant microorganisms from animals to man recommended by the Swann committee last November (see *Nature*, 224, 835; 1969). In deciding which antibiotics to ban from feeds the government has largely followed the views of the committee.

Penicillin, chlortetracycline and oxytetracycline thus become "therapeutic", and the retail sale or supply of feeds containing them will be unlawful except on prescription or with written veterinary authority. Tylosin, most of the sulphonamides and four nitrofurans will be available only on prescription. Here, sulphaquinoxaline and sulphanitran will, in spite of Swann, still be allowed in feeds for poultry to provide resistance to coccidia, a group of protozoans which occur as parasites in the digestive system. The government is apparently happy that the use of these two sulphonamides will not conflict seriously with the Swann criteria for feed antibiotics: that they should be of economic value, have little or no therapeutic application and not lead to the development of resistant strains of organism. Sulphanilamide will also be available without prescription, but only as a surface wound dressing for animals.

The approved feed antibiotics will then be flavomycin and virginiamycin, which are to be officially classified as such in time to be freely available before the other antibiotics are outlawed. A third feed antibiotic, zinc bacitracin, has already been passed for use in promoting growth.

RABIES

Dogs and Cats Relieved

MR JAMES PRIOR, Minister of Agriculture, and Mr Gordon Campbell, Secretary of State for Scotland, wasted no time in accepting the chief recommendations of the interim report of the Committee of Inquiry

on Rabies (see *Nature*, 227, 765; 1970). It took them just one week to digest the report and to announce that the complete ban on the import of domestic dogs and cats will be lifted on September 16. They have also decided that a quarantine period of six months is sufficient provided that imported animals are vaccinated twice during their stay in quarantine kennels.

One of the committee's recommendations which will not be implemented, at least for the time being, is that dogs and cats should be vaccinated before import. This recommendation, the Ministry of Agriculture suggests, requires further exploration because it would necessitate changes of procedure in the country of export. Should rabies break out in a quarantine kennel, the period of quarantine for other animals in the kennel will be extended for as long as the ministers think fit and no more animals will be admitted to the kennel concerned. This precaution is presumably dependent upon the committee of inquiry's final report on the isolation of animals inside kennels.

The 850 dogs and 150 cats which are at present in quarantine and which will have completed nine months in kennels by September 7 can look forward to an early and painless release—they will be allowed home without vaccination on that date. The remainder of the dogs and cats in quarantine kennels—about 1,100 dogs and 200 cats—will be only a little less fortunate. They will have to be vaccinated twice, and will be returned to their owners from September 30 onwards, as soon as they have completed their nine months' stay in kennels. As far as other canine and feline animals are concerned, the committee has not made up its mind whether or not the ban on their import should be lifted and the ministers have accordingly decided that the ban should stay. But any of these animals which have already served nine months in quarantine can be freed from restrictions on September 7.

AGRICULTURAL SCIENCE

Missed Targets

by our Soviet Correspondent

SOVIET agriculture is lagging behind the target proposed for it in the 1966-70 five-year plan. This was pointed out in no uncertain manner at the July plenum of the Central Committee of the CPSU, and was officially disclosed last week by F. D. Kulakov, secretary of the Central Committee, during the opening speech of the Lenin All-Union Academy of Agricultural Sciences. The Academicians of the LAAAS pointed out that the development of agriculture is inseparable from the progress of science, and that the facts presented at the July plenum call for the development of improved methods of tilling the soil, for new, high yielding strains of crops and livestock, and for new means, especially biological ones, of protecting plants. The need for new and more effective technology leading to the complete mechanization of agriculture and stock-rearing, and for "economically based recommendations" for the agricultural industries on a regional, rather than an all-union basis were also emphasized.

This meeting comes at a significant point in the history of Soviet agriculture—shortly before the