

# FARMSTOCK

STOCKBREEDERS' & FARMERS' MONTHLY  
NEWS, SALES & ADVISORY SERVICE ON ● LIVESTOCK ● POULTRY, ● FISHING  
● HORTICULTURE ● FARMING & ● FOODSTUFFS ETC.

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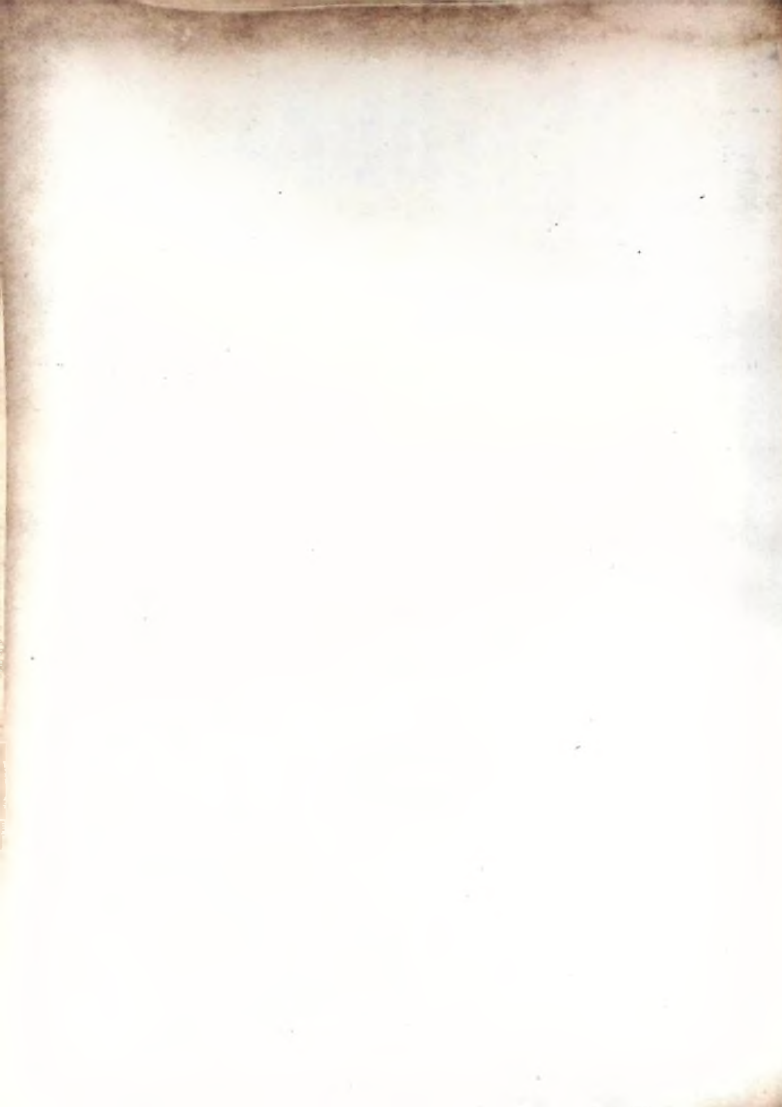


## CHAMPION SOW

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Vol. 1 No. 12

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P. O. BOX 79, EBUTE-METTA, NIGERIA.

MANAGING EDITOR Abiodun Ojugbele

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## New Equipment



The age of co-operation has arrived. With mechanisation of farming and stockbreeding, huge machines are appearing on the farm — tractors, harvesters, feed-mixers and what have you ?

The latest addition to this automatic 'helpers' relieving the farmer of a lot of laborious task is the **AUTOMATIC EGG GRADER & PACKER** first mentioned in our Feb '69 edition. A British firm has perfected an egg grader. Since customers are choosy and it pays the farmer to sort out the eggs into grades for different prices the egg grader becomes important particularly on farms producing about a thousand eggs daily. The idea of co-operation comes in if a number of neighbouring farmers or those feeding big cities — Lagos, Ibadan, Kano, Kaduna, Benin or Port Harcourt can contribute sums to purchase a machine to serve all the various farms together. Or an enterprising egg dealer can buy this equipment shown above. Since eggs come from various sources, the grading by the dealer will just be a matter of a few hours with this grader.

In principle the machine is sensitive to the weight of each egg. It can operate the automatic, high capacity loading, candling, grading and packing unit—capable of handling 10,800 eggs an hour. The eggs, 15 at a time, are passed on a three-track conveyer into a candling unit, where powerful lights and mirror reflection help in the detection of all types of egg fault. From this stage the eggs move on and are sorted, by weight, into their correct grade. Final stage embraces the stamping of the eggs, which are aligned and collected into rows in the packing head. Here sets of nylon fingers receive and gently place the eggs into automatically conveyed cartons.

The machine is ready for export. The manufacturers will entertain enquiries from overseas. For further particulars contact **BEV NEVIS EGG EQUIPMENT LTD., TROWBRIDGE, WILTSHIRE, ENGLAND.** and please mention Farmstock Magazine as your source of information.

Advertisement

# WORM INFESTATION

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## IN POULTRY

---

DO YOU ALWAYS REALIZE THAT WORMS CONSTITUTE A BIG THREAT TO YOUR PROFIT MARGIN FROM POULTRY AND PIGS? HERE ARE SEVERAL WAYS IN WHICH WORMS (ASCARIDS) ADVERSELY AFFECT YOUR ANIMALS AND THEREBY DRAIN AWAY YOUR MONEY:

1. Reduced vitality and increased susceptibility to diseases like pneumonia, gastritis, and anaemia.
2. Intestinal upsets such as diarrhoea or even blockage of the intestinal track by worms when present in large numbers.
3. Loss of egg production in poultry.
4. Reduced growth rate, your poultry take a longer time to reach profitable point of lay.
5. Increased mortality from worms and diseases which are aggravated by them.

You all know that when animals are healthy, they are able to withstand diseases more than when they are weak. At certain stages of the worm's life, they feed from the blood of the hosts (birds) while at other stages, they live directly on the food which their hosts have eaten.

Different stages of growth of worms are found in different parts of animals body - in liver, heart, lungs and finally adults and eggs in the intestine. In all these body organs, the worms can cause

severe damage. The havoc which worms have been causing in your poultry and pigs is now very clear.

These symptoms will help you to suspect that your poultry is infested by worms: Growth retardation, pneumonia, gastritis anaemia, reduced egg production, loss of vitality, increased mortality.

**CLEAR WORMS WITH  
GLOBE PIPERAZINE  
WORMER**

By using Pfizer Globe Piperazine Wormer, you can avoid the problem enumerated above. Here is how to make the wormer work:

(a) POULTRY: 4-6 WKS

Use two spoons (1 fluid ounce) per two gallons of drinking water for one day.

ABOVE 6 WEEKS:

Use 4 table spoons (2 fluid ounces) per 3 to 4 gallon of drinking water.  
Repeat the following day.

(b) PIGS AND HORSES:

Use 2 table spoons per 100 lbs. body weight as a drench or mixed into palatable feed. Dose pigs just before weaning or 4 weeks prior to farrowing.

N. B. Do not give any feed or water until the medicated ones have been consumed.

Repeat the above dosage one month later in order to clear out the worms completely.

Also, remove litter after deworming so as to avoid any reinfestation. And because deworming imposes a stress on your animals, give TERRAMYCIN (Oxytetracycline hydrochloride) Soluble Powder for at least 2 days before deworming, and continue for a minimum of 3 days after this operation in order to overcome the stress.



# WORMS

MONTHLY ADVISORY SERIES

Preparing for the

THERE ARE MANY DIFFERENT KINDS OF WORMS WHICH CAN LIVE IN CHICKENS. SOME DO LITTLE HARM TO THE BIRD, AND OTHER KINDS ARE SO UNCOMMON THAT THERE IS NO NEED FOR POULTRY FARMERS TO WORRY ABOUT THEM.

There are three or four common kinds of worms that can do damage on farms that poultry farmers ought to know about so that they can take steps to prevent them.

The commonest worm is called *Ascaridia galli*, the large roundworm of poultry. It lives in the upper half of the small intestine, and is between one and two inches long. Although thin it is quite easy to see. Both male and female worms live in the bird's intestine all their lives.

Eggs laid by the female worm pass out in the bird's droppings, and may in time be eaten by another bird. After the worm eggs have been passed out it is some time before they can infect another bird, usually about 10-40 days. If another bird eats the worm egg before the

time it will not become infected. If no bird swallows the worm eggs for a long time it will then die.

The number of worm eggs which die depends a lot on the conditions. More will live to infect other birds when litter is wet than when it is dry. After an infective egg has been swallowed by a bird it hatches into a young worm and grows during the next 7 weeks into an egg laying adult worm. While young the worms burrow into the lining of the bird's intestines, and if there are many worms they may damage it severely. A small number of adult worms do little harm to the bird.

The damage is done by large numbers of young ones. There are some precautions which farmers should take to prevent worms:

(1) If birds are reared and lay in cages they will not get worms.



One of the latest hybrid hens developed by Thornber Brothers Ltd., of Yorkshire, northeast England is the New 404 Plus, pictured here. Field tests have shown it to have an average production of -246 eggs a year, six more than the 404 it replaces.

(2) If the litter is dry most of the worm eggs will die before they reach the infective stage, and it is not likely the birds will suffer much.

(3) Worm eggs can live in a poultry house from one batch of birds to another. If the floor is made of earth the number of worm eggs which survive increases each time a new lot of birds goes through, and the problem gets worse and worse. Concrete floored

houses can easily be cleaned and disinfected so that it is much less common to find birds suffering from worms in concrete floor houses than in those with earth floors.

#### EFFECTIVE REMEDY

The cheapest and most effective remedy for roundworms is Piperazine. This remedy is made and sold by several different companies, but all the forms of it are equally

Continue on p. 13

## POULTRY

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Rainy Season

(2)

by L. J. Elmslie

# COCCIDIOSIS IN CHICKENS

Coccidiosis is one of the most serious diseases of growing chickens, either replacement layers or broilers, and is found wherever birds are kept. There are different forms of the disease each caused by a different type of coccidia, but all are fairly similar to each other, and scientifically are all species of the Genus *Eimeria*.

The nature of the disease and the means of preventing it can best be understood by studying the life cycle of the coccidia.

Coccidia are very small and can only be seen through a microscope. They spend most of their life cycle in the bird's intestines, but there is a phase called the oocyst which can survive outside the bird for a very long time. When a bird swallows one of these oocysts the hard skin of the latter becomes soft, and eight coccidia called sporozoites are released into the bird's intestines.

Each one then enters one of the cells lining the bird's intestines, where it grows. Eventually the cell dies and bursts and many of a new form of coccidia called merozoites are released into the intestines. Each merozoite enters another cell, and so the process continues, damaging the bird's intestines while the coccidia multiply.

Eventually the coccidia enter a sexual phase which results in oocysts. These are passed out in the droppings. At first the oocysts are not fully developed and for 48 hours need very moist conditions and also sufficient air

After 48 hours the eight sporozoites have formed inside the oocyst and it has also developed a hard shell, which resists heat and cold, wet and dry.

## EFFECTS

The damage to the bird comes from the destruction of the cells of the intestinal lining. In some types of coccidiosis there will be bleeding and deaths.

In milder cases the birds grow thin and even though they do not die may never develop properly. Broilers which have had coccidiosis may be too badly finished for the frozen trade, and egg production from layers which have had the disease in the growing stage will be reduced.

Food consumption which falls during the course of the disease may be higher than average after the birds recover.

Symptoms of coccidiosis are birds standing about with drooping wings, and head drawn back to the body. They do not eat much, become thin and may die. One type of coccidiosis caused by *Eimeria tenella*, caecal coccidiosis, can be recognised by blood in the bird's droppings.

This is because this species attacks the bird's caeca, and these are full of blood when the birds are post mortemed. Other species attack other parts of the intestine, and although there is no blood in the droppings inflammation of the intestine can be seen at post mortem.

It is possible on post mortem examination to see which species of Coccidia have caused the outbreak on a particular farm. This is a matter for experts, who will look at which part of the intestine has been attacked,

since each species has its own particular part, and will also look at the oocysts under the microscope, since the oocysts are a little bit different in each species.

The other two serious coccidia besides *Eimeria tenella* are *Eimeria necatrix* and *Eimeria brunetti*. The other five species are not often so severe as these three. Sometimes a flock of birds can get one species of coccidia followed by another but it is very unusual to have two attacks of the same species in the lifetime of one bird, as the birds become immune.

## PREVENTION

Prevention of coccidiosis is by one or more of the following methods.

(1) Keep birds in battery cages so that they are out of contact with droppings and cannot eat oocysts. This is the most effective method.

(2) Clean out deep litter between batches and disinfect the floor. The floor should be concreted, as it is impossible to kill all the oocysts on an earth floor.

(3) Keep litter dry. Oocysts newly passed need a very high humidity for the first two days. If the litter is dry most of them will die, but if it is wet most will survive and infect the birds. Round the drinkers is the most dangerous place for wet litter.

(4) Feed a coccidiostat in the feed.

It is normal nowadays to feed a coccidiostat, a drug to control coccidiosis, in broiler and chick feed, but not in layers' rations. This will prevent serious trouble most

of the time. However it is important to know that feed manufacturers only include enough coccidiostat to prevent the disease under average farm conditions.

If the birds have to suffer a very heavy infection, due for example to the re-use of old litter or to damp litter, or an old earth floor, they will get the disease. So prevention by the farmer is still necessary as well as by the food compounder. The farmer should of course always make sure that he is getting food which contains a coccidiostat in his broiler and chick rations. All good food compounders include them automatically.

## TREATMENT

Treatment for coccidiosis is by a drug given in the drinking water. This is because birds which have this disease almost stop eating but continue to drink. Before treating a flock of birds which have had a coccidiostat in their food always ask the food manufacturer advice, as some drugs can be poisonous if the birds get too much, for example by getting coccidiostat in feed and perhaps the same drug in the drinking water as a cure.

Continue on page 13

**THERE IS A SPECIAL DEMAND FOR LARGE CHICKENS, EITHER COCKERELS OR BROILERS AT CHRISTMAS, AND FARMERS WHO DO NOT NORMALLY PRODUCE TABLE BIRDS MAY FIND IT WORTH WHILE REARING A BATCH FOR THE FESTIVAL. THE SAME THING IS ALSO TRUE, BUT TO A LESS EXTENT FOR OTHER FESTIVALS.**

Farmers who do decide to rear special batches for festivals must be careful not to compete directly with year round broiler producers, who are fully equipped with freezing and packing plant, and can produce frozen birds at less cost, and of better appearance than can the ordinary farmer. Instead it is better to concentrate on selling all birds locally, and if possible live. In that way costs will be kept to a minimum.

**QUANTITY**

The farmer thinking about christmas poultry will first of all have to decide how many birds to rear. First he must think about the selling of them. How will the birds be sold? How many can he sell in each way?

It is always better to have 100 few birds than two many, so he should be cautious. Secondly he must decide where to rear the birds. It is not likely to pay to make a special building, since it would not be used for very many weeks in the year, so the best thing is to use a building that is used for some other purpose the rest of the year, or

which happens to be empty.

The number of birds to be reared may be limited by the space available as well as by how many can be sold. As a general guide about 200 birds is quite enough for some one who is trying to sell Christmas poultry for the first time. Someone who is well established, and nows he can sell more can expand from year to year as demand for his birds increases.

**TYPES**

What is the best type of bird to rear for Christmas trade? There are three types which may be profitably used, and the choice will depend on the sort of customer to whom the farmer expects to sell, and on the availability and cost of each.

(1) Pure Broilers are the fastest growing, and therefore the most expensive to buy as chicks. They should be chosen when customers require each bird to be large. Also they have the best conformation, and must also be chosen when customers insist on that. Because of the much better conformation, which is seen most clearly in a frozen bird, it is essential to use pure broiler breeds if they are to be sold in this conditions. If the birds are to be sold live, however to customers who are less concerned with the appearance of the carcass than with that of the live birds, pure broilers may sometimes make less profit than crossbreeds or cockerels, because the birds still look young when they are ready to eat, but a cockerel of

**Business Opportunities:**

a heavy laying breed looks more mature when it is ready for eating.

(ii) Cockerels of laying Breeds.

Not all cockerels are equally suitable. Those of the light hybrids based on the white Leghorn Breeds will never grow to the size needed for a christmas birds. Cockerels from medium hybrids mostly brown egg birds will grow to quite a good size, and are cheap to buy as day olds. They are not suitable for freezing, but sell well alive.

(iii) Crossbreeds between a layering and a brown egg laying strain.

These are a compromise between the last two types bred by using a broiler, type cockerel on a laying type hen.

The chicks are cheaper to produce than pure broilers, because the female parents lay more eggs and eat less food than broiler parents, and are quite useful table birds although slower growing than pure broilers and dearer to buy than layer cockerels.

**CORRECT FEEDING**

Correct feeding of table birds is very important for profit. The aim is to get the bird to eat as much as possible and as soon as possible. There are two reasons for that. Firstly the younger a bird is the better it is at turning food into meat. The food conversion rate in a typical case falls from one pound of meat from 1 1/2 pounds of feed in the first week to one pound of meat from 3 1/2 pounds of feed in the 10th week.

**CHICKENS**

**MONTHLY ADVISORY SERIES**

There is a growth made in the first week is cheaper for the farmer. Secondly a bird needs quite a lot of food for maintenance. Any that is left after that is used for growth, so if a bird is a bit short of food it will maintain itself all right but will not grow, so the farmer gets nothing for his expenditure.

The correct type of food to use varies according to the breed chosen and the age to which the birds will be kept. All table birds should begin on broiler starter ration. Broilers should change from this to a broiler finisher at 4-5 weeks old and stay on it up to 9 weeks.

Larger birds to be kept over 9 weeks can be feed most economically be by adding ground maize or guinea corn to broiler finisher after that age

Increase the proportion gradually as the birds grow up to a limit of 30%. The best growth rate from cockerels will be obtained from the same feeding plan, but the higher cost of broiler food makes it more economical to use broiler starter for two weeks only and then chick food to 8 weeks.

The feeding of broiler finisher for the final two to three weeks of life will improve the finish of the birds, so depending on the size at which the birds are to be sold either go on to broiler finisher plus maize according to age, or include a period on ordinary growers ration. Feed cross bred birds as broilers.

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# Poultry for Xmas

## FORM OF FOOD

The form of the food is very important. Table birds should always be feed pellets or crumbs to make sure of maximum growth. Skin colour can be altered by feeding in the same way as yolk colour in layers. Yellow colouring from yellow maize or grass will go into the birds skin, but not in all breeds.

By

J. ELMSLIE  
M. A. (Contab)  
of L...ka & Thorner Ltd.

America prefers yellow skinned birds, and they use both yellow skinned varieties and food containing yellow pigments for their broilers. In Britain white skinned birds are preferred, and these can be produced either by using white skinned varieties or by excluding yellow maize and grassmeal from the ration.

Birds for the Christmas table should be kept on litter. It is important to have a good depth, 4-5 inches, to prevent breast blisters and avoid intestinal diseases. Probably it will not pay to have special buildings for Christmas birds, so one used for rearing layers during the rest of the year may be used.

The area required per bird is 1.25 - 1.75 square feet per bird according to the size they will be reared to, and for feeding there should be 5 tube feeders per 100 birds,

or 4 inches of long trough per bird. Otherwise housing for Table birds is just the same as for growing pullets on litter.

## CAPONISATION

Chemical caponisation can be used to improve the carcass quality of cockerels. A tablet of Moxoestrol, a chemical similar to the female sex hormones, is put under the skin of the bird's neck six weeks before it is due to be killed. The tablet slowly dissolves into the bloodstream, and the birds begin to look more like hens than cocks. Also they fatten more, but since the comb and wattles shrink the appearance live is not so attractive.

Caponisation is satisfactory if there is no risk of people eating the pellets, for example if the birds are to be sold frozen. But if the birds are to be sold live it is better not to risk an undissolved pellet being eaten by a customer, since it can affect people as it can birds.

## PROFIT

To say what the profit should be from Christmas poultry is not easy. The farmer should keep a careful record of food and chick costs. To record all other costs, however, is tedious, and as the total is likely to be small he can assume that if he adds 9d. a bird to feed and chick cost he will have allowed enough for small expenses such as litter, fuel and overheads.

One should look for at least 1/- a bird on Christmas chickens, if the business is to be counted as a success, but of course prices will depend on the market and vary from year to year. Also the price the farmer gets will depend on how many birds the farmer sells retail, and how many wholesale, which will



## A New Breed of Birds

*The Ross Rocket, one of the new British birds being marketed. It weighs less than four pounds (1.8 kilogram) and is as prolific as heavier birds despite eating considerable less food.*

*It is only under standard conditions free of diseases that birds like this can fulfill such claims as are made of the Ross Rocket.*

*Though not good as broilers because of its demunitive stature, a Xmas season egg prospector can bank safely on this egg laying 'machine' to make more money at a period when everyone likes to use eggs for one type of food or another.*

depend on the position of the farm and the scale of production.

In a good year profits of several shillings a bird may be made, but will depend on

careful management of the birds, great attention to feeding, and so having the best quality of bird for sale at the time they are most wanted.

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It has long been the policy of Government in Britain to make agriculture more efficient, so keeping down the costs of production while at the same time maintaining farm incomes. Recently this has been done by providing production grants for improvement and free advisory services.

But in 1967 the Minister of Agriculture, then Mr. Fred Peart, authorised the formation of a new body, the Central Council for Agricultural and Horticultural Co-operation. Its job is to encourage farmers to get together and pool their resources for production and marketing.

After only 18 months existence, the Council is making a big impact on the farming scene and giving great impetus to the co-operative movement.

## RIISING COSTS, STATIC PRICES

Farm costs are rising by at least 5 per cent a year and farm prices, at best, remain the same. Co-operation provides one of the few ways in which costs can be cut, perhaps with fewer men, less machinery or cheaper fertilizer, and returns can be improved by getting better contracts, for instance, or doing more on-farm storage and processing.

The Council, which gets all the money it needs from the Government, with no particular limit, has enviable powers for grant-aiding projects and the less enviable responsibility of deciding which projects warrant help and which not.

When a new co-operative is set up, the Council can pay up to one-third of the cost of buildings, fixed equipment, working capital and management expenses—and would like to extend its grant powers further, to offer a simple lump sum incentive to co-operators even when expenditure involved does not attract grants

In its first year and a half, the Council has looked at 322 schemes and dispensed £886,000 in grant for schemes whose total value runs to nearly £4,000,000.

About 40 per cent of the approved schemes have been horticultural—for the production, grading, storage and marketing of fruit and flowers—and half the schemes have been for co-operative marketing. Vegetable and pea growers have been quick to take advantage of grants, followed by cereal potato, production, storage groups, and grass drying and silage groups.

Livestock producers have been slower to seek help, although there are signs that this is changing. Fewer than 20 each of pig, dairying and beef enterprises have been accepted, but more are in the pipeline.

## FREE FEASIBILITY STUDY

The most important aspect of any scheme is the feasibility study, which either provided free or qualifies for 75 per cent grant. It can either be carried out by a specialist private consultant or by an adviser attached to an official organisation like the National Agricultural Advisory Service or one of the societies which

exist to help co-ops

The Central Council can make use of existing organisations of this sort than setting up a big one of its own.

## 15 PER CENT RETURN DEMANDED

The Council wants a co-operative to make use of 15 per cent on new investment, although the figure may be varied, says Chairman Mr. Rogo

by MIC  
of the "F"

says, "The Council is determined to measure the usefulness of its work strictly in commercial terms.

Co-operation is not in itself, but must be to profitability and efficiency. So no project is accepted unless the Council is certain that it will be clearly worth while.

Strict conditions are put into the contracts with participating farmers and the Council. Each must be financially com

It does not matter who raises his money from the bank, from a feed store or from any other source, but there must be no money attached to the bank; the members are free to make their own decisions without the training influences

# STRENGTH TIVES

In a production group every contributing member must be a participating farmer and all must be directors; in a marketing group the amount of money invested is usually related to how much the individual is planning to use its services. All written in the contract are clauses which commit the members to make use of it—many such groups suffered in the past from poor loyalty from their members.

Where grant is provided for buildings or fixed equipment, the contracts run for five years; where it is only working capital the period is only three years. But whatever the time, the Council keeps a watching brief on the enterprises for its duration and insists on

## L BERENDT

& Stockbreeder"  
on

regular reports and balance sheets from the directors so that Council development staff can be sure that all is going well and give advice if necessary.

## STRONGER POSITION

The extension of co-operative farming in Britain puts the farmer into an altogether stronger position. To begin with he gets more independence whether he is buying or selling, and so is better able to resist the vertical integrators. Companies which take into their own control the means of production and marketing and which, in the case of egg production for instance, have already swallowed a big slice of the industry.

Borrowing money for development becomes easier, for

the co-operator can put on his bank manager's desk a professional feasibility study which shows just how the capital is to be used. To a bank manager who usually has to base his lendings on past credit-worthiness, this comes as a joy.

The Council is giving a big push to business thinking in farming and is bound to change concepts of marketing.

To many people, marketing means going to market; to the modern co-operative it is an operation which begins when the Council begins management courses for the managers and directors of co-operatives, this should increase the professionalism applied to the job.

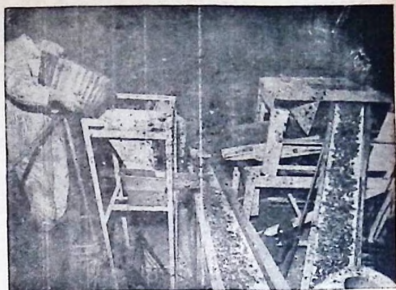
## STILL YOUNG

As the Council is still fairly young, most of the schemes it is helping are in their early stages, but among typical ones is a pilot scheme by five societies to improve the quality of beef breeding stock on hill farms, a plan by six pedigree pig breeders to produce hybrid gilts for sale, and a scheme under which five dairy farmers are pooling resources to build up a 500-cow herd.

Schemes of this sort all improve the farmers' efficiency; in return for the surrender of independence they win a new joint strength.

An organisation of this sort is ideally suited to tackling the problems that beset farmers throughout the world and particularly in the advanced countries of Europe—problems like those rising costs and shrinking incomes.

## WHERE CO — OPERATION CAN HELP



### CASHEW NUT CRACKING MACHINE.

The cashew is a tough nut to crack—and to do it on a commercial scale has been one of the intractable problems to be tackled by Britain's Tropical Products Institute in London; but this machine may well prove to be a complete solution. One model has gone to Quilton in Kerala State, India, where it has been undergoing extensive trials.

First the nuts are roasted, making the shells brittle and extracting the highly corrosive but valuable liquid. They are then fed into this simple but robust shelling machine, which works on the centrifugal principle. Shells and kernels are then separated from uncracked nuts which are returned to the cracker.

## RABBITS

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# NEWS

## FARMING BRIEFS

DR. LEMU, OJ  
NEW VET. MAN

A Veterinary Officer in the North Western State Ministry of Natural Resources and Cooperatives, Dr. Ibrahim Lemu has returned here recently at the end of his six-year course in Veterinary Medicine at Tuskegee Institute, Alabama, United States of America.

Dr. Lemu studied and obtained doctorate in Veterinary Medicine as well as B. Sc. degree in Agriculture

## ETSU NUPE ADVISE FARMERS

THE Etsu Nupe, Malam Musa Bello, has urged the farmers in his Emirate to cultivate more farms and put more effort in growing both food and cash crops so as to satisfy the need of the country.

The Etsu was recently speaking at the opening session of the two new agricultural extension offices built at Lemu and Mokuwa in Bida Emirate at the cost of £500.

He urged the farmers to make best use of the opportunity given them and advised them to attend the offices regularly so as to gain more experience in the modern way of farming.

## AGRIC BOSS DEAD

THE N.A.'s Supervisor for Agriculture, Malam Shehu Sokoto, Sarkin Tudu, has been reported dead.

Born in 1916, Malam Shehu held various appointments with the Sokoto Native Authority first in 1933 as Veterinary Assistant and in 1945 he was transferred to the N.A.'s Agricultural Department as an Agricultural Assistant.

In 1952 he was promoted to the head of the department (Agriculture), with the title of Sarkin Tunu, the post he was holding until his death.

## 'LEGALISE OGOGORO'

WHEN WE TALK OF IMPROVING THE ECONOMY OF THE SOUTH EASTERN STATE OF NIGERIA, WE SEEM TO LOSE SIGHT OF LITTLE THINGS WHICH COULD HELP US ACHIEVE OUR OBJECTIVE OF A PROSPEROUS STATE.

FOR INSTANCE, WHAT CAN BE THE SENSE IN LABELLING OUR LOCALLY DISTILLED GIN 'ILLICIT AFTER EIGHT YEARS OF INDEPENDENCE, ASKED MR. B. B. BISOONG OF IKOM.

He added "Colonialists and imperialists have a way of discouraging a people in order to extend their stay where they are unwanted by attaching a label of inferiority on whatever we do.

"Apart from seeking to perpetuate their stay in the countries upon which they force themselves, they boost the economy of their own countries by forcing their product down the throats of

the people they oppress and suppress.

Even before the routing of colonialism in this country South-Easterners had called for the legislation of our home-made gin, but to no avail.

With independence the call has been louder but still to avail. I begin to wonder whether neo-colonialism has replaced colonialism in the State, and in Nigeria as a whole.

We know as a matter of fact that exporters of spirits from abroad will frown at the manufacture of spirits in the State because it will mean their destruction"

## NIGERIANS STUDY ADVANCED AGRIC

TWO Nigerian graduates are at present in Britain studying agriculture at one of the country's leading agricultural colleges.

They are: Mr. Olusegun Famoriyo, who works at the Institute of Social and Economic Research, Ibadan University, and Mr. Bamidele Oladejo Adelana, who works at the Moor Plantations Research Station in Western State.

They are both at Wye College, the School of Agriculture and Horticulture for London University.

Mr. Famoriyo, who obtained a B. Sc. Honours degree from Durham University, north-east England, in 1966, is taking a post-graduate course at Wye's department of economics.

Mr. Adelana, a B. Sc. graduate of Ibadan University, is carrying out research studies into crop physiology with special emphasis on the growth and development of maize, peas and tropical vegetable processing crops at Wye College's 720-acre farm

## 'DONT EXPORT FOOD' ARMY CHIEF

TRADERS IN THE SOUTH EASTERN STATE HAVE BEEN WARNED AGAINST EXPORTING GARRI TO THE CAMEROUNS REPUBLIC AND TO ANY OTHER FOREIGN COUNTRIES.

The warning was given in Calabar last week by the Calabar Sector Command of the third Marine Command Division of the Nigerian Army.

A statement signed by the Adjutant-General, Major

Okpo, said information reaching the Army Headquarters in Calabar reveals that gari and other locally produced foodstuffs are being regularly exported to the Camerouns by canoe.

As a result, the statement points out, "there is scarcity of such food items locally and their prices have risen"

Guards at check points at the beaches have been instructed to intensify their vigilance in a bid to counte future indulgence.

## SES CO-OP BORN

A co-operative field staff union has been inaugurated in the South-Eastern State.

Addressing the inaugural meeting of the union, the Principal Assistant Registrar of Co-operative Societies in the State, Mr. T. O. Udoh, called for hard work and team spirit among co-operative field workers throughout the State.

He said hard work and team spirit were the main pre-requisites to effective organisation of co-operative societies.

The Registrar pledge the assistance of his department members of the union at all times.

The union later elected Mr. S. W. Essien, President; Mr. J. O. Edet, Treasurer; and Mr. Ini A. Usoro; General Secretary.

## SOVIET COUNTRYSIDE TODAY

DURING the period of 1965 to 1968, capital investments into agriculture in the Soviet Union increased by 41 per cent, from 14,700 million to 21,000 million a year. Today's agriculture has over 1.7 million tractors and about 580,000 grain combine harvesters.

Over the eight months of 1968, the countryside received 281,000 tractors and more than 68,000 combines.

Continue on next page

## COCOA IN SES

THE Government of the South-Eastern State has declared mid-June, Thursday, 10th July 1969 as the commencement date for the 1969/70 cocoa season.

The Government has also approved Apapa as the port of shipment for the 1969/70 cocoa season.

The following producer prices which shall apply at the port of shipment have been fixed by the Military Government of the South-Eastern State for the 1969/70 cocoa season.

- (a) Cocoa Grade 1 - £150 per ton
- (b) Cocoa Grade 2 - £135 per ton

The Government has also fixed Block Buying Allowances to Licensed Buying Agents as follows:

- (a) Cocoa Grade 1 - £6 per ton
- (b) Cocoa Grade 2 £5 10/- per ton

Transport differentials between gazetted buying stations and the port of shipment in accordance with the approved marketing schemes for the 1969/70 cocoa season have also been fixed by the Government of the State.

## PALM PRODUCE JANUARY 1970

THE next palm produce buying season in the South-Eastern State begins in January 1970.

This follows immediately after the end of the present buying season in December 1967.

An announcement to this effect by the Permanent Secretary in the State Ministry of Trade & Industry, Mr. A. H. Ikwang, advised all buying agents to submit their applications before the end of the current season.

He reminded the general public that to qualify as a buying agent, a person should have a storage approved by a Produce Inspector, a scale, a bank account of at least 41,000, and a security of £1,000.

Each licenced buying agent is also expected to be able to buy at least 250 tons of palm produce.

Continued from page 6

## WORMS

satisfactory. The cost of treatment is less than 1d. per bird. If a flock is badly affected it should be treated twice, the second time 18 days after the first, - the second treatment kills any worms which may have been too young to be killed by the first treatment.

Some farmers dose all their birds which have been reared on litter, but are going into cages for laying, as a routine. Piperazine may be given in either the feed or the water, according to the maker's instructions. Either method is successful and the choice depends only on the way the maker has prepared it, (soluble or insoluble) and on the farmer's convenience.

Less easy to see, but more dangerous to chickens than the large roundworms are the hairworms, Capillaria species.

There are a number of different Capillaria worms, but the farmer need not concern himself too much with difference, leaving that to the veterinary specialists. Two species live in the crop, the other two in the small intestine.

The worms are very thin and hairlike, and so difficult to see, although they may be from .25 to .75 of an inch long. The life cycle of two of the Capillaria worms is similar to that of the large roundworm. Adult worms live in bird's crop or intestine, and there they lay eggs which are passed out in the bird's droppings.

After some time the eggs develop to an infective state, and if swallowed by another bird will develop into worms. The other two species of Capillaria will not re-infect birds directly. Worm eggs passed out by the birds will only develop if eaten by earthworms. Birds are infected if they eat the infected earthworm.

Prevention of Capillaria follows exactly the same principles as for Ascaridia. Either keep the birds in cages or if they must be kept on litter, keep it dry, have a concrete floor, and disinfect thorough-

ly between batches. Capillaria are less common than Ascaridia but when they do occur can cause quite severe losses.

Piperazine, which is so effective against Ascaridia is quite useless against them. The most effectively remedy is Mintic, by I. C. I.

## OTHER WORMS

Heterakis gallinarum, the caecal worm is very common, but in itself harmless. It is about half an inch long and lives only in the bird's caeca. It can be prevented by the same means as other worm but is not important enough to require treatment. It is important to turkey farmers because it carries the Blackhead disease organism, and for that reason turkeys should not be reared where there have been chickens without very thorough disinfection.

Most turkeys now are given an anti-Blackhead drug in the feed as a routine.

Finally we may mention tapeworms of chickens. All tapeworms require two alternate host animals. One type must spend part of its life cycle in a chicken, and the other part in an ant, so that chickens can only become infected through ants. Another tapeworm has snails as its alternate host.

Prevention of tapeworms is therefore very easy, just a matter of preventing access to snails and insects. However prevention is necessary as there is no good remedy.

Continued from page 7

## COCCIDIOSIS

This is particularly true with sulphadiazine and sulphamonomethoxime, and it is not true of some others. Two common effective remedies are "Amprolol soluble" or "Squadil".

Sub-clinical infection which means that the birds have the disease, but not badly enough for it to be easily seen, is important with coccidiosis. Growth rate is reduced and

the birds are less profitable than they should be. This is especially so with broilers.

It is one of the reasons broilers grow fast in cages, and one of advanced stages of rearing replacement layers in cages.

Coccidiosis is often associated with other diseases, and management problems. This may be because the bird is weaker and so less able to resist the coccidiosis, but much more often it is due to birds eating less food so getting less coccidostat, and therefore not being so well protected against the disease.

Shortage of feed is an accident certain way to coccidiosis, and lack of troughs and overcrowding can also cause it. Marek's disease otherwise known as fowl paralysis, is very commonly associated with coccidiosis. A not the possible cause is the use of home mixed rations which may be low in Vitamin A, an important vitamin for disease resistance.

Turkeys do get coccidiosis, but the species are different and often cannot infect the other. Prevention and treatment however are the same as for chicken

To sum up, prevention of coccidiosis depends on keeping a clean litter dry, the floor clean between batches, and giving the birds sufficient access to good food to keep them growing fast. If these conditions are fulfilled it should be no problem.

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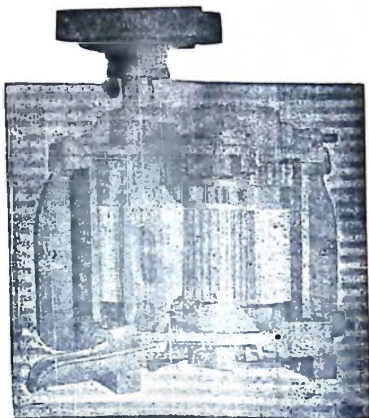
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**T**APEWORMS infest domestic animals either as adults in the intestine or as bladder worms outside the digestive tract. On casual examination there is little resemblance between a bladder worm and an adult tapeworm. Actually, however, a bladder worm is an incompletely developed tapeworm consisting of a fully formed head and neck.

The head of the bladder worm bears four cup-shaped suckers and a double crown of hooks for the attachment of the future tapeworm to the wall of the final host's intestine. The head and neck are inverted into the thin-walled bladder at one end, the arrangement resembling the tip of a glove finger that is pushed in at the end. The inverted head and neck appear as an

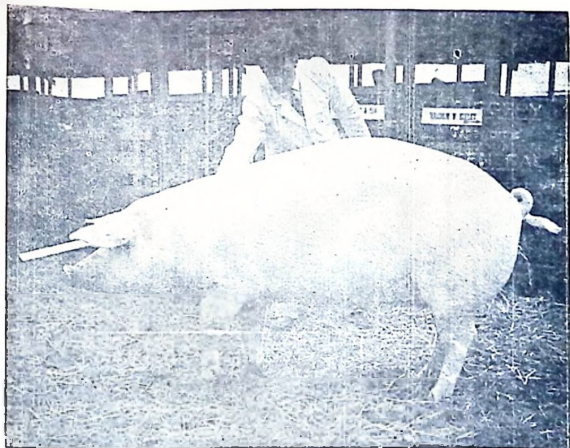
opaque object in the bladder, which is filled with a clear fluid.

If a bladder worm or part of a carcass containing one or more bladder worms is eaten by an animal capable of harbouring the adult tapeworm, the head and neck of the bladder worm are turned outward in the stomach, and the wall of the bladder portion of the worm is digested on reaching the intestine, the head becomes attached to the wall by means of its suckers and hooks, and the neck begins to bud off segments, forming in the course of about 2 months a jointed, flattened, whitish worm which may attain a length of several feet. Next instalment read about the bladder worm.

TAP

# EWORMS

Continue our series on **PIGS: THEIR INTERNAL PARASITE**  
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**RECORD  
HOLDER**

The Maca Marigold 6th Supreme Champion  
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demands a high level of  
sanitation.

IN  
OUR  
NEXT  
ISSUE,  
READ  
ABOUT  
BLADDER  
WORM.

# LAUGH !!!

"Laugh and the whole world laughs with you, frown and you wrinkle your face alone."

**A**t a dinner party recently was a beautiful lady among the early arrivals. She was in a tight fitting mini with a large area of her bust bare. Her pendant on an exquisite cold chain was a supersonic liner. To a young man sitting opposite her and who had been gazing at her for sometime, she asked:  
"Do you admire my aeroplane?"  
"No please," I am particular about the airfield", he retorted.

**M**y young brother was showing a neighbour's child our house for the first time and I heard him announce proudly as they passed the cocktail cabinet -  
"And this is my father's chemistry set."

**T**wo friends who had been without food throughout their journey, finally arrived, and were waiting in a cafe to be served. Presently, the waiter came

in with a dish of yam cake, one side of which was badly burnt. The waiter placed the dish on the table between them with the burnt side facing one of them.

Ayo, who was facing the burnt side of the yam cake thought for a while and then said to his friend "By the way, Olu! do you know what the scientists are trying to do now-a-days?" "No" replied Olu. "Well," said Ayo, "they are trying to turn the world upside down like this," as he said so, he demonstrated by turning the burnt side of the cake now to face his friend.

Olu stared at him, stared at the cake the burnt side of which was now facing him, then stared at him again, and asked, "By the way, Ayo, are you now a scientist?" "No" replied Ayo.  
"Well! leave the blooming world where it was," said Olu, turning the cake back to its original position.

**A** BUSINESSMAN explains why LEBON men love the really short skirts worn there. "At last, men on the buses during the rush hour can get seats," he said. "The girls are afraid to sit down."

**A** PARSON was reproaching a member of his congregation for being habitually drunk. He said Kente, you know that drink is your enemy why don't you try to avoid it?" "But, parson!" replied Kente, "you have told us often enough that we should love our enemies." "Oh yes, Kente!" said the parson, "Love your enemies indeed, but do not swallow them."

**A** MAN in a booze managed to get to the door of his flat and for some time was fumbling with his key. It soon became obvious to the passers-by that he was having difficulty in opening the door.

One of them came to him asked if he could be of "Yeah guy!" he said, "just the door to keep it steady, I put the key into the keyhole."

## OPINION POL

What do you think of

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