JANUARY 77

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Abiodun Ojugbele.

AGRICULTURE

COOPERATIVES

POULTRY

FISHERY

GENERAL

AGRICULTURAL
SCENE

OFN: nationwide

Since the Head of State—Lt. Gen. Olusegun Obasanjo—launched the Operation Feed the Nation, much response has been noticed all over the Federation. Hardly any other programme has had so much true support. The reason is not far-fetched. One is that Agriculture had always been a lowly pursuit scoffed at by the educated, despised by the indolent and avoided by the jobless even though everybody eats daily. But because the Head of State could put aside his national cares temporarily though and apply his brawn to till, many mimics with a view to playing to the gallery have made sure their show were publicised as widely as possible. Report shows that everywhere people are applying themselves to the task. The programme is spreading like wild-fire.

Leading the campaign was a joint effort by the Nigerian Airways and Caledonian Airlines which to mark their joint inaugural flight gave the National Committee on OFN one thousand five hundred chicks. This paper concedes good judgment and planning to the National Committee but would like to suggest that the birds should not be sent to a Government poultry farm. Rather they should be divided free among very small but well-managed poultry farmers.

To reach such people, agricultural extension workers have to be consulted. Such a plan would yield good returns as opposed to lumping the poor chicks into a Government farm where disinterestedness on the part of the workers on the one hand and official red-tape militating against quick and timely decisions by the officials on the other hand will cause the young chicks to die en masse within a short time.

Not unconnected with the OFN the Agricultural Credit Bank has disclosed its plan to open an area office in Enugu, Anambra State. The idea is to bring financial facilities near the farmers in that sector of the nation. More of such offices at nodal towns and state capitals will justify the claims of the Agric Credit Bank to spread agricultural credit evenly all over the country.

Plans are also on to breach the havoc caused crops by pests. The State Government of Ogun, Ondo and Oyo have jointly earmarked ₦3m for spraying insecticides to combat cocoa pests. Also in Kaduna state a crop protection unit has been set up.

Mention must be made of the liberal compensation by the Federal Military Government to Student participants of the OFN, each student receives ₦96; where private farmers are involved they pay only ₦20, the balance will be added by the state Government.

In effect, the country is poised for a big agricultural reawakening which we pray may be sustained to keep hunger and dearth of food off our doors once and for all.

Not everyone will ever get a personal car or house, but everyone has to be fed. It is the appreciation of this fact by the Federal Military Government that started the OFN which has endeared the FMG to many hearts and homes.

New Prices for Fertilizer Out

New prices for all types of fertilizers have been fixed in Kaduna State, recently.

Announcing this at a press conference in Kaduna, the state's Commissioner for Economic Planning and Rural Development, Malam Altimu Liman Mohammed said this was in line with the Federal Military Government's decision to pay up 75% subsidy to all state governments on the purchase of fertilizers.

The prices which are meant to assist the farmers in their participation of the Operation Feed the Nation are as follows:-

Single Superphosphate, ₦3 per bag; S.S.P. (Baronate) ₦3 per bag; Calcium Ammonia Nitrate ₦3 per bag; Sulphate of Ammonia, ₦3.75 per bag; Urea, ₦4.75 per bag; NPK (20-20-0) ₦4.75 per bag; NPK (14-28-14), ₦4.75 per bag and N.P.K. (20-20-0) Baronated, ₦4.75 per bag.

Members of the public have been urged to report to the nearest authorities if they were asked to pay more than the approved prices.

This is necessary in view of the recent report of Commission of enquiry set up by the present administration to probe the ways and manners that the previous distribution were effected.

From a section of the report, it was disclosed that instead of the fertilizers being distributed among the farmers for their use, some officials in the states' ministries saw the exercise as an opportunity to enrich themselves.

The lessons gathered from this were that the new administration in the states must not neglect the welfare of the farmers.

And now that the rain season is here with us and operation-feed-the-nation spreads along, the focus should be on agriculture to plant today for tomorrow's harvest.

AGRIC NEWS BRIEFS

OGUN STATE

An ultra-modern abattoir is to be built in Abeokuta. Five slabs are also to be constructed during the current financial year. To this end, the state government is to receive a grant of about ₦2 million from the Federal Military Government. This was made known by the states commissioner for Agriculture and Natural Resources, Mr. M. Ola Buraimoh.

KADUNA STATE

At the opening of a two day meeting of the Northern state's Pest Control Review Committee, the states Commissioner for Agriculture, Malam Aliyu Bala Kuki, disclosed that more than one third of grains crops harvested in the country are destroyed yearly by pest.

He also disclosed that the United Nations Food and Agriculture Organisation (F.A.O.) has estimated that foodstuffs destroyed by pests in Africa alone were sufficient to feed 55 million people yearly.

OYO STATE

Contributing his progressive quote to the "Operation Feed the Nation," the Orangun-Ila in Oyo state has called on farmers to increase their food production ten-fold.

About ₦327,000 have been approved as loan to boost small scale industries and food production. Out of the amount, about ₦76,000 has been voted for financing a food processing pro-

Continue overleaf

FISHERIES TRAINING IN BRITAIN

Ten senior Nigerian fisheries officers representing both Federal and State fisheries have begun a three-week examination and assessment of the training facilities provided by British establishments in the whole field of fisheries.

The tour, organised by the UK's White Fish Authority, will take them to the fishing ports of Hull and Grimsby, and up to Mallaig and Ardtoe on the west coast of Scotland. The party will also be visiting research centres and fish farms.

At the end of the tour they will be chief guests at a special reception given by the Deputy Lord Mayor of Hull in the city's Guildhall.

The tour will end on September 3 with a visit to London and the Tropical Products Institute, the scientific unit of Britain's Ministry of Overseas Development which advises developing countries on the handling, processing, storage, transport and marketing of a wide variety of tropical products.

Nigerians on the tour are Mr. E.O.E. Odiong, Chief fisheries officer, Ministry of forestry, Fisheries and Water Resources, Calabar

Continue on p. 10

NIGERIAN EXECUTIVES SEE TRACTOR PRODUCTION

Mr. A.B. Ajomale, the Acting Assistant General Manager of the Great Nigerian Insurance Company in Lagos, tries his hand at the wheel of a tractor produced by one of Britain's leading manufacturers of agricultural machinery. Together with seven other top Nigerian businessmen, he recently visited the English midlands factory of Massey-Ferguson at Coventry, during a six-week intensive management development course in neighbouring Birmingham.

The courses run by G & B Management Development Ltd. have been developed specially to meet particular needs. The Nigerians represent the vanguard of many more overseas middle and senior management men will be attending courses in Britain. The programme includes lectures from many experts in the field, as well as visits to major manufacturing organisations.

The other Nigerians taking part in the course are left to right: Mr. Sola Awojobi, General Manager and Director of Nidoco Ltd., of Lagos; Mr. James Afolabi, Managing Director of Alumaco of Nigeria Ltd., of Lagos; Mr. Joe Arausi, Managing Director of A.G. Christie (Nig.) Ltd., of Benin City; Mr. S.A. Akinjobi, Managing Director of Jolliters Chemists (Nig.) Ltd., of Lagos; Mr. Olu Agbesanwa, Import Administrative Manager of Adebowale Electrical Industries Ltd, of Lagos; Mr. Ayoola Ogunlana, Manager of Research and Development, Wema Bank Ltd. Lagos and Mr. Hassan Akande, Production Manager of C.F.C. Furniture Co. (W.A.) Ltd., of Mushin.

OPINION

AGRICULTURE IN SCHOOLS

Most schools founded on grammar basis have become too difficult for adaptation. More often than not the head was groomed to teach arts which were the vogue and criteria for civilization at one time. Such a head usually frowns on any attempt to mark out plots for school farms.

Some parents too are too highbrowish to think of farming. Such feel that the education they will give their children will stand them well enough to buy food at any price. As a result such children grow with a snub for farming and the farmer.

No wonder some students of the OFN ran away from their beats. University graduates while they will not run away practice lots of indolence to shack chores in farming.

It is needless to say that the search for money blindfolds these people—parents and teachers—but students' early life has to be corrected. While parents may be allowed to handle their children as they like, their training is the State's concern; as such, the best of every form of training should be given. Over the years some will gravitate to one form of endeavour or another but each will have a faint idea of and appreciate what the other chap is doing (say) farming.

It is time therefore that Agriculture forms a compulsory subject for the first three years at School before the choice of subjects for the School Certificate. Such an exposure will definitely prepare many a youth against later life. Besides, student who offer Agriculture in the Exams need encouragement.

PROCESSING PLANT

Perhaps the greatest head-ache a poultry breeder has is disposal. Oftentimes a contract fails or festival sales flop as a result of an untimely catastrophe thereby causing poor sales. In effect birds are left uncleared.

Marketing also entails forward planning. As such, evisceration, deep freeze storage and packing become necessary.

A processing plant entails a lot of capital which most farmers cannot afford. To keep them in business is to arrange how to absorb all poults at marketing age by a Central Processing Plant which will process and store chickens for marketing.

Maintenance which is an important overhead in Processing Plants is also a big problem the small farmer should not be saddled with just as he is not bothered about flying in his day old chicks, but pays a small amount for those whose main job is airfreighting

BANKS AND COLLATERALS

Of late our banks have become unduly touchy when it comes to giving loans to farmers. While an LPO or a Contract Agreement presented by a trader or builder satisfies the banker to push out a loan, he (the banker) usually asks for property and other assurances from the farmer before helping the latter with a loan however little.

Admittedly farming suffers from a lot of vagaries—weather, sales, mortality or poor harvest—which affect agricultural economy; it is wrong to feel that these hazards are always with the farmer.

In many callings, a small outlay suffices to set up a good business but not in agriculture. This is why graduates in Agriculture usually seek employment rather than set up private farms.

Nevertheless, the Banks have to ensure the return of their loans. A way out is to study impartially a farmer's proposal and help him towards the fulfilment of that objective not only by lending out the much-needed money but also by supervision and whenever possible to supply on charge inputs—equipment, seeds, fertilizers, day-old chicks etc.

Continued from P 5

NEWS

ject in Ibadan. Interested Industrialist have been called upon to apply for the loan.

ONDO STATE

The state Government has voted ₦50,000 to the "Operation Feed the Nation." The state's commissioner for Agriculture and Natural Resources, Mr. Sola Fapohunda disclosed this when addressing volunteers during his tour of the project sites in Akure.

He further said that the amount would be used to purchase among other things cutlasses and hoes. A secretariat would be built and horticultural centres would also be established.

He further announced that 2260 tonnes of assorted types of fertilizers were on sale at highly reduced prices while 36 kilogrammes of various vegetables were also on sale throughout the state to farmers.

CROSS RIVER STATE

The Cross River State farmers' Association's general secretary, Mr. O.U. Ekpo has called for the formation of a national association of farmers. This he said, would enable farmers to speak with one voice to the Federal Government on how best to improve farming.

ANAMBRA STATE

A new rice herbicide which is used worldwide, "STAM F 34T." was launched at Abakiliki by the National Oil and Chemical Company.

Speaking on the occasion, the agrochemical manager east for the company, Mr. M.C. Onuoha said the application of the herbicide in any rice field saves the problem of weeding.

The chemical which has no effect on the soil or the rice, kills all the weeds and allows the rice to grow to harvest period.

Replying, the Abakiliki based distributor of the National Chemicals Limited urged farmers to use Vetox 85 which is specially made for rice nurseries to go along with the "STAM F 34T" chemical.

Later the chemical was sprayed at Mr. Ibeh's rice farm and it proved effective.

Continue on P 7

LAGOS STATE

A Nigerian Institute of Food Science and Technology (NIFST) comprising of food scientists and technologists in Nigeria has been established.

At an inaugural meeting held recently, over 50 members of the Federal Institute of Industrial Research, Oshodi (FIIRO) endorsed its objectives.

Among its objectives to disseminate knowledge amongsts food technologists by sponsoring symposia, seminars, studies and organising other programmes highlighting solutions to food problems.

Officials appointed to govern the Institute include Dr. I.A. Akinrele, Director of FIIRO (President); Nigerian Breweries Mr. A. Ferdinandus (Vice President), Dr. P.O. Ngoddys, a senior lecturer, Department of Food Science and Technology at the University of Ife (honorary secretary).

The officer in charge of the National Accelerated food producing project of the state's Ministry of Agriculture and Natural Resources Mr. J.A. Ajayi announced in Epe Division that some varieties of grains such as maize and rice would be experimented upon. This he said would help farmers of the state not only to have quality yields but also to increase their productivity.

KANO STATE

The acting governor of the state, Group Captain W.I. Aleyideino has warned student volunteers of the OFN against loafing about.

He made this warning when he made surprised visit to a farm centre to assess their progress. He said the volunteers should not regard the OFN as "a kind of jamboree for relaxation."

KWARA STATE

The Military Governor Brigadier George Innih has donated a piece of land in Agenebode to the 145 Infantry Battalion of the Nigerian Army.

It was announced by the Four Infantry Brigade Commander in Agenebode Lt. Col. L.P. Nyam when he launched the scheme there.

Speaking later to the press, the Second-in-Command of late 145 Battalion, Lt. L.G. Pabor said his men have already planted maize, rice, onions, groundnuts and potatoes.

Continue on p. 26

NIGERIAN VET STUDIES IN BRITAIN

Nigerian veterinary officer, Dr. John Bincan, carries out a calcium study of laying poultry serum at the School of Tropical Veterinary Medicine in Edinburgh, Scotland, using a spectrophometer. Dr. Bincan, a divisional veterinary officer in the Jos division of Plateau State, is currently taking a diploma course at the school in animal health and production.

The course, run jointly by the school and the Department of Agriculture of the University of Edinburgh, lasts for nine months. On completing it, Dr. Bincan plans to tackle a research project directly related to his field work at home, which will lead to an M.Sc degree.

LETTERS

FARMERS WILL STAY IN FARMS IF...

Awka Division in East Central State is the main source of food supply for Aba and Port Harcourt townships. But the division is hardly remembered in the distribution of amenities.

The power station at Afam in the division is the source of electricity supply to Aba, Port Harcourt etc., yet no town in the entire area has electricity supply. The Government should encourage the farmers by providing them with good roads, electricity and pipe-borne water.

ABA. **Monday Eket,**

FARMSTOCK, REGULARLY PLEASE

I wish to be regular subscriber of your magazine, 'FARMSTOCK.'

The last copy I have was published in July 1971. I shall be grateful if you can send me all the copies till date as well as subsequent ones.

Please let me know what to pay and qualify as a regular subscriber.

Thanks for your co-operation.

Yours faithfully,

Mrs. Bernadette O. Awah.
Itohan Grammar School,
P. O. Box 81,
Benin City.

Editor's Note:

Thanks indeed for your encouraging letter. A despatch of some old copies has been made to you. Annual subscription for FARMSTOCK is ₦4.20 please.

IS IT STILL ON?

I would like to know from you if your FARMSTOCK (FARMERS monthly magazine) is still in circulation and if it is how much will it cost to post one copy to me monthly.

Thanks

Yours faithfully,

D.O. Osotayo.
62 Ojowo Road,
Ijebu-Igbo,
Ogun State.

Editor's Note

Farmstock is still circulating. annual subscription is ₦4.20 please.

POWER SETBACK

The supply of electricity of Minna Town in the Niger State has never been good for months This is hindering the industrial and agricultural development of the town.

The state's government should do something to improve the supply of electricity so as to combat some of the problems encountered in respect of water supply in small scale industries.

G.H. Zuru, KADUNA.

WATER

WATER!! PLEASE

I wish to appeal to the Niger State Government over the water shortage in Bida. Also the frequency of power failures is no less sickening. I hope that the State's government will do something to alleviate the sufferings of Bida inhabitants.

The government should know that "Water" is very necessary for agriculture in general.

Alhaji Mutani Bida,

KANO.

POULTRY

By Our Poultry Correspondent.

ESSENTIAL FACTORS IN POULTRY

Water!

Not a few think that all that is necessary in poultry is to house the birds either on deep litter (a fenced enclosure) or battery cages, give feed and begin to collect profits from investment involved. No one will say such is impossible but there are a number of conditions to be fulfilled prior to expecting any profit.

Commercial poultry breeding demands taking good care of the birds unlike when the birds have to come about fending and helping themselves. After selecting a good breed, usually from a reputable hatchery, one has to ensure good housing which will be discussed later and feed them well too.

It is on this aspect of feed that this article is directed. To be able to control every action of the birds restricting their movement is necessary. Let us now agree that our birds are protected. The next most important need of the birds is WATER.

In intensive units, restricted birds should be given all their requirements. Water is very important for easy digestion. Many poultry farmers complain about the poor performances of their birds without ensuring adequate supply of clean water.

It is highly beneficial to recognise the need for water, which is about three quarters of the constituents of an egg or broiler by weight. With the exception of fresh air, water is the cheapest raw material required for the production of eggs or chicken meat. Because we operate in this country through two extremes of plenty (during the rainy season) and scarcity (during the dry season), we tend to take water for granted—a steady supply of good water.

In less fortunate parts of the world, water is treasured stored and conserved. Even in this country, with the demands of an expanding population and industry, we shall have to reconsider our wasteful ways, plus, of course, the fact that the demand for water like other items of life, has risen, hence its cost. In many parts of the country now, water-meter is used, In order to reduce overheads therefore, poultry farmers have to use water economically.

A few facts and statistics quickly underline the significance of water to the poultry producer. WATER accounts for 70 per cent of a newly laid egg, and nearly 60 per cent of the body weight of an adult hen or broiler at killing age. After 8 hours without water, egg production is seriously affected and nephritis can be induced. After 24 hours without water at a temperature of 80°F, the birds will start dying.

Lack of Water: Effects

Inadequate water consumption, caused by faulty supply or insufficient drinking points, depresses production and growth rate, and on many farms, it is an unsuspected cause of poor performance. Water consumption should be observed and recorded as carefully as food consumption whenever possible. A sudden drop is often indicative of the approach of a health crises.

Inadequate or badly distributed drinking points may trigger off latent infections. The critical period is often during a heatwave. Being unable to loose heat by perspiration because the body is covered with feathers, poultry depends largely on drinking water to keep down body temperature, and the birds soon become prostrate if they are deprived during hot weather.

A poultry farmer must be aware of the golden rule that adequate clean water supply should be made available to poultry at all times, but he may fail in his duty to recognise the right quantity to be given at different stages of growth.

Water requirements can be

THE POULTRY INDUSTRY

The photo was taken at a new broiler farm in the Kaisiadoris District of Lithuania. This is the usual picture of a chicken house its inhabitants are having their dinner. The only thing unusual about it is that there are no people distributing the feed. They have been replaced by machines. All the production processes at the farm have been mechanized or automated.

Last year, the farm produced its first 400 tons of chicken meat. After its second and third production lines are commissioned, it will be one of the biggest in the republic. It will produce annually for the market 5,500 tons of meat and 8.8 million eggs.

Photo by M. Baranauskas (APN).

calculated, but this is frequently very different from actual usage because layers may drink or waste water through excessive drinking or boredom resulting in flicking or splashing. It is important to take this into consideration during the calculation of water requirement because such wastage can easily add up to a higher percentage over the Bird's needs.

The following facts and figures may be a useful guide in planning for poultry water requirement.

AT BROODING

Water Consumption

AGE	100 chicks/day
0–2 weeks	1–5 litres
2–4 weeks	5–7½ litres

Practical application from day old to 4 weeks:-

1) One drinking fount/80 chicks
2) One circular automatic drinker/50 chicks.
3) 1.27–2.54cm of continuous supply.
*4) One nipple troughing/chick drinker/lb chicks.
5) Or a combination of any of the above.

*Where nipple drinking system is used in Cages.

AT REARING

Water Consumption

Ages in Weeks	Consumption/100 chicks/day in litres
4–6	9.1
6–8	11.4
8–10	13.6
10–12	15.9
12–14	18.2
14–16	20.5
16–18	21.6

Water supply is one of the key factors in choosing a poultry farm site. The criterion should be the ultimate, not the immediate requirement. Many development plans have been devastated by inadequate reserves.

Water is essential for the cleaning of poultry equipment, being the only effective means of loosening hardened droppings. Subsequently, it serves as a medium whereby disinfectants can be applied to buildings and equipment in solution. Water is a vehicle of waste. This could be mostly on premises where a poultry is undertaken. It carries blood, feathers, poultry manure and other wastes as effluent into sewage works. It is also employed as a medium through which harmful organisms and other dirts in poultry houses are washed away.

Waste water from the laying hens is released firstly from the lungs as part of the respiratory process, and secondly in faeces. It is normal for faecal matter to have a water content of about 70 per cent. Thus if 1,000 layers produce 1 ton of manure per week, this will include about 1,500 lbs water.

Water has many poultry functions:

a) it softens feed,
b) aids digestion and absorption of food.

It is essential for internal lubrication and elimination of waste products. Its role in egg production and egg size cannot be over-emphasized, representing as it does so much of the egg content itself.

NEGLIGIBLE COST

Good water costs money, but when one is faced with its problems that may cause economic loss to a poultry enterprise, one will not mind spending more money in that direction. Consumption per laying bird of all purposes at N 1 per 100 litres, averages under 1k per bird on a medium sized farm. Even if there were no social objections to wasting water, good economic reasons should encourage poultry farmers to avoid unnecessary wastage.

In a very intensive unit water problems could really be very bad experience indeed. Since the side effects could principally be loss of production and high mortality rate. The problems of negotiation, carting, distribution and the practical application to the birds are strong enough to induce headache, stomach troub-

Continue on P 25

POULTRY FARMING

FOR SUCCESS

It is the poultryman's wish to make poultry 'pay.' To do so, is to ensure that the enterprise yields a satisfactory net profit commensurate with the capital invested, the labour used and the risks taken. Poultry can definitely provide this profit, either as a full-time job or a profitable part-time hobby, but only so long as the man:

1. Has a 'love for livestock'—an inherent stock sense.
2. Is willing to work hard and to be certain that jobs are done before delay has resulted in the birds being adversely affected.
3. Has the basic technical practical knowledge.
4. Adopts sound business principles and manages efficiently.
5. Does not experiment (or only with great—caution—).
6. Has sufficient capital, and apportions it correctly.
7. Starts right.

In return, one will enjoy a satisfactory income, establish a pleasant gainful and health-giving work, enjoy the thrill of tasks successfully accomplished, be master of his own destiny and provide an established business for one's children.

Let us be frank. Failure will follow if one:—

1. Takes no interest in the stock
2. Is lazy and too fond of leaving the work to others.
3. Has no experience at the commencement.
4. Is slack in buying and selling and in keeping books and records.
5. Wastes time and money trying unproved schemes.
6. Is under-capitalized.
7. Starts wrong.

HYGIENE, SANITATION AND DISEASES

RECOGNITION OF SYMPTOMS

It is of vital importance that the poultryman should have some knowledge of the diseases that he may possibly run up against in the course of his work. He must also know that steps to take to counter an outbreak, pending the arrival of professional help. Above all he should be thoroughly conversant with all the preventive measures necessary to keep diseases at bay.

HYGIENE AND SANITATION

Disease control can only be achieved with a sound knowledge of husbandry and hygiene. The correct spacing of birds, adequate ventilation, the prompt recognition and isolation of ailing birds, general sanitation of housing and equipment are just as important as knowledge of modern drugs. Sub-normal health resulting from parasitism, faulty nutrition and chronic infections, interferes with production potential and takes an even greater toll of profits than actual diseases.

DISEASE RESISTANCE

Let this be well understood: There are germs, parasites fungi and viruses in the air, buildings soil and those carried by other poultry animals, merely waiting their opportunity to attack. I am convinced that the best way to prevent disease is to breed, house, feed and manage in such a manner that the disease 'bugs' (most of them) just cannot make their presence felt. Disease can be successfully combated by:—

1. Selecting the breeders for stamina and health first, and heavy egg production second.
2. Breeding from birds which have no inheritable diseases (such as bacillary while diarrhoea).

FACTORS

3. Breeding from which have no predis position to disease (such as fowl paralysis).
4. Keeping the defensive system of the fowls' bodies in a high condition of perfection.
5. Feeding a complete ration in an approved manner.
6. Housing efficiently, particularly with regard to over-crowding.
7. Providing clean, well-drained ground at all times (grass, where provided, must be kept short).
8. Paying strict attention to sanitation and cleanliness.
9. Using disinfective where necessary.
10. Immunization by vaccination.
11. Exterminating rats and mice.
12. Destroying external parasites (flea, lice and mites) and internal parasites such as worm.

So there is no one secret operation to prevent disease. It is a matter of preserving good health daily.

GAMBO ADAMS

Headquarters
1, Armoured Regiment
Nigerian Army ARMD Corps
P. O. Box 759
KADUNA. Tel: 23301 Ext. 3.

Continued from p. 5

FISHERIES

Mr. O. Elliot, Chief Fisheries officer, Ministry of Agriculture and Natural Resources, Ibadan.

Mr. Z.A. Adesanya, Chief Fisheries officer, Ministry of Agriculture and Natural Resources, Abeokuta.

Mr. E.N. Eziuzo, Principal Fisheries Officer, Ministry of Agricultural and Natural Resources, Enugu.

Mr. O. Bakare, Principal Fisheries Officer, Ministry of Agriculture and Natural Resources, Ikeja.

Mr. M.A. Obakin, Principal Research Officer, Nigerian Institute for Oceanography and Marine Research, Lagos.

Mr. C.C. Emehelu, Principal Fisheries Officer, Ministry of Agriculture and Natural Resources, Owerri.

Mr. A.A. Aderounmu, Senior Fisheries Officer, Federal Department of Fisheries, Lagos.

Mr. M.P. Hyang, Senior Fisheries Superintendent, Ministry of Agriculture and Natural Resources, Jos and Malam Bawale Kankia Higher Fisheries Superintendent, Ministry of Agriculture, Kaduna.

AGRIC NOTES

WEEDING CASSAVA

CROPS WITH PARAQUAT

Paraquat can be used to control weeds in cassava cultivation, provided the timing is right.

Weeds are a major problem in cassava growing and control is necessary if crops are to be good. It is particularly important that weeding should be done in the early stages.

Handweeding is carried out in Thailand at 45 days, 3-4 months and 5-6 months after planting. In Malaysia handweeding intervals are 25-30 days, 45-60 days and chemical weed control six months after planting.

Now work done by Mr. R.S. Harper of Plant Protection Ltd of Britain, in Thailand has shown that paraquat—a bibyridil herbicide developed by the company and now in worldwide use —can be used from three months onwards.

Not Too Early

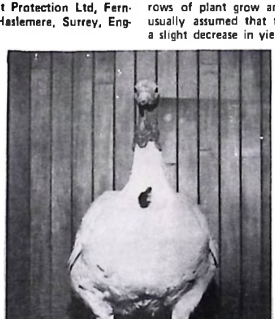
Because paraquat is deactivated by the soil, it is not taken up by root crops such as cassava. But it must not be used at too early a stage, because green photosynthetic tissue then exist at the base of the stems and paraquat coming into contact with this tissue will be absorbed, leading subsequently to the death of the plant.

By the end of three months growth this green tissue has lignified to a brown bark which will not take up paraquat. It is at this stage that, Mr. Harper found, paraquat can be used without damaging the cassava. In view of the value of cassava as an explorable source of starch, anything that will reduce the cost of production is of practical value to the grower.

Application of paraquat can be made at the rate of 0.2-0.4 kg/ha at three months and then repeated 10-14 days later. One further spray before harvesting was found desirable. The paraquat used was Gramoxone containing 200 g/l active ingredient.

Mr. Harper's work is reported on in detail in PANS, a journal on pest control published by the Centre for Overseas Pest Research, College House, Wrights lane, London W8.

Plant Protection Ltd, Fernhurst Haslemere, Surrey, England.



NEW BRITISH TURKEY BREED FOR THE EXPORT MARKET

A new male strain of turkey—the "Triple 5 Male Line"—made its debut in Europe at the recent Paris Agricultural Fair held at Porte de Versailles. Developed after many years of genic study by a famous breeding firm in northern England, the bird will economically supply high quality fresh and oven-ready, carcasses throughout the whole weight range from 4lbs. with very low evisceration loss and a high meat to bone ratio.

Other characteristics include improved conformation and shorter legs, giving a more compact carcase. The new "Triple 5 Male Line" is available to British United franchise breeders now and commercial poults will be on the market soon.

Breeders: British United Turkeys Ltd., Stops House, 25 Nicholas Street, Cheshire, England.

INTERCROPPING CAN BE BENEFICIAL

Intercropping—the practice of growing a second crop, usually in parallel rows between the first—is commonly practised in the tropics. The intercrop often has a shorter growing season than the other and this, it is thought, enables the land to be used more economically.

It also has the effect of keeping the soil covered between the slower-growing rows of the main crop, which is good where soils are liable to erosion by rain and wind.

However, there must be some competition for nutrients in the soil and even light as the two rows of plant grow and it is usually assumed that there is a slight decrease in yield from each crop because of this. But this is accepted for the benefit of harvesting two crops from one piece of land in a season.

The benefits can be argued for a long time, so it is of interest when actual scientific study confirms the advantages of the practice, at least in one crop.

Higher Yields

Mr. D.J. Andrews, of the Plant Breeding Institute, Cambridge, eastern England, has shown while working at the Institute for Agricultural Research, Samaru, Nigeria, that intercropping of sorghum with early cereals such as millet results in not only higher total yields of the two crops but also in higher yields of the sorghum than if grown as a sole crop. The main object of Mr. Andrews' work was to compare tall local sorghum varieties with new dwarf varieties both as sole crops and when intercropped with other cereals. He found that the dwarf varieties were much superior to the tall.

In his experiment he obtained 27% more total gain (from sorghum plus millet) when the sorghum was a dwarf variety than when it was a tall one. The yields were higher also from dwarf sorghum grown as a sole crop.

The reason for vastly increased yields when using dwarf varieties would appear to be partly that they do not compete so much with the intercrop and that they were able to withstand competition themselves.

A course for future research is suggested. Millet is also available in dwarf varieties and other work has shown that dwarf millet also is not so susceptible to competition. One can only speculate on the likely results of dwarf sorghum intercropped with dwarf millet.

(Plant Breeding Institute, Cambridge, England. Also, Institute for Agricultural Research, Samaru, Zaria, Nigeria).

SPRAYING COCOA INCREASED THE PEST!

That spraying against a pest can, with time, have the reverse effect to that of controlling it has been proved by Mr. J.D. Majer, of the Imperial College Field Station, Berkshire, southern England. While working on cocoa at Kade in Ghana he studied the effort of DDT spraying against the cocoa-pod-husk miner (Marmara sp).

This particular pest does not reduce yield but due to the effect it has on the husk it is often impossible to tell if the pid is ripe or not. DDT is a method of control.

Pods were studied for Mar-

AGRIC NOTES

mara damage on two plots, one of which was sprayed and on the other spraying was discontinued in December.

In the plot left unsprayed the initial incidence of damage was high in December but it dropped off in May as pods grew at a greater rate than the miner could attack them. Damage then increased and by the following December 95% of pods were affected.

More Damage

On the plot which was kept sprayed one would have expected damage to be less. But while it built up more slowly, by the following December damage was 99.5%.

A study was then made of plots of two other places, Aburi and Amanokran, which had been sprayed only rarely. There was found to be little miner damage at these places.

It became apparent that the miner is subject to natural controls, probably in the form of parasites, which are themselves killed by DDT at a greater rate than the miner.

Mr. Major concludes, therefore, in describing his work in the Ghana Journal of Agricultural Science, that the trees are better left unsprayed.

(Imperial College Fields Station, Silwood Park, Berkshire, England).

IGNORE THAT SOIL NITROGEN

All plants, crops included, require nitrogen. And it is often concluded that if nitrogen is present in the soil, it will be available to the crops grown on it. Nothing could be further from the truth, says Dr. I.S. Cornforth, of the Faculty of Agriculture, Queen's University of Belfast, Northern Ireland.

He has done extensive work on nitrogen in West Indian soils and has come up with the conclusion that the nitrogen available in the soil at any one time depends so much on vegetation, rainfall and soil drainage and the presence of non-acidic salts—not just on total nitrogen at all—that in most soils one can ignore it when calculating fertilizer dressings.

Pick the wrong moment, and the available nitrogen (that is, that suitable for plant use) may be right down, while the total nitrogen is high. This is because plants need their nitrogen in the form of mineral salts, either as nitrates or as ammonium salts.

If the base salts are not available in the soil to combine to form nitrates or the soil is not wet enough for the "mineralisation" of nitrogen derived from organic sources to occur, then crops will not grow. This can happen when the soil is rich in total nitrogen, but it is all organic nitrogen.

Available Too Late

Later on, that nitrogen may be mineralised and therefore available—too late. At no time has the total nitrogen changed. Dr. Cornforth says, that total nitrogen estimations are therefore valueless, particularly in tropical soils where the situation changes rapidly.

In Trinidad, for example, more than 99% of the total nitrogen in the surface of cropped soils is contained in organic matter. This proportion may decrease to 98% in fallow soils but it still implies insufficient mineral nitrogen.

The pool of total nitrogen in the soil is replenished by the additions of further organic waste, by the fixation of nitrogen by freeliving organisms in the soil and by rhizobial bacteria. But if the conditions are not favourable to mineralisation, nitrogen is better added in the form of mineral fertilizer.

Calculation of fertilizer required on the basis of total soil nitrogen would be quite wrong and estimates undertaken on the basis of available nitrogen in the soil will just as likely be wrong for the moment the nitrogen is required by the plant.

The correct dressing is therefore best determined by ignoring soil nitrogen and, it would seem, by basing it on known crop requirements, assuming about 50% will be actually taken up.

EXTENDING BREADFRUIT STORAGE LIFE

Storage life of breadfruit can be increased by keeping it at a lower temperature, though there is a risk of chilling damage at temperatures below 12°C. Polythene bags can extend post harvest life, as also can holding under water—a method commonly used in Jamaica.

These are the findings of a team which included Mr. A.K. Thompson of Britain's Tropical Products Institute whose brief was to investigate methods of storage for local markets in Jamaica and for export.

Breadfruits are a staple carbohydrate diet in many countries but they decline rapidly in quality after harvest. As an export product and to some extent even for local sale they are distinctly risky. Anything, therefore, which will reduce the rate of deterioration will benefit the grower.

The decline in quality is marked by a softening of the fruit and it is this the team were anxious to inhibit. Curiously, softening occurs after harvest regardless of maturity. It was also observed that allowing the fruit to fall to the ground as a means of harvesting has no accelerating effect on the softening process.

(Tropical Products Institute 56 Grays Inn Road, London WC1).

INSECTICIDE FOR CITRUS FARMERS

A new insecticide, called "Amitraz," has been found by the Boots Company Ltd, Nottingham, England, to be successful against several pests of citrus.

Boots, a household name for pharmaceuticals in Britain, has also been a manufacturer and formulator of crop protection chemicals—originally for gardeners—for some time. The company's business with British farmers has recently been expanding enormously, but Boots is still a relative newcomer in the matter of supplying its products to overseas farmers. Recent research indicates, however, that the company has one or two products suitable for the tropical farmer—and Amitraz is one.

Mr. D.N. Weighton, of the Boots research station at Lenton, Nottingham, has found that Amitraz controls citrus red mite (Panonychus citri) and wax scale, such as white wax scale (ceroplastes destructor).

Citrus red mite has been controlled with 0.02% active ingredient and wax scale with 0.04%–0.05% active ingredient, with or without the addition of white oil.

California red scale (Aonidiella auvantii) at high population rates have been kept in check.

(D.M. Weighton, The Boots Company Ltd, Lenton Research Station, Nottingham, England).

WEED CONTROL BOOST

Ammonium salts are recommended by the Weed Research Organisation, Yarnton, Oxfordshire, as an occasionally viable boost to the effectiveness of foliage-applied water-soluble herbicides.

The addition of ammonium salts, say the WRO, can sometimes increase this effectiveness by up to 400 per cent. Since ammonium salts are not only safe to handle but quite cheap, cost-saving would be an added benefit.

Every calling, vocation, profession or 'what have you?' has its devotees. Not a few for some inexplicable circumstances stir new courses in life occasionally.

A few others for monetary considerations go into certain businesses with a view to siphoning out as much money as possible in the shortest possible time when the going is good. But some others are driven by some urge to provide essential services shunned by many for various pardonable reasons.

Farming is one such venture. To set up farming much is involved namely capital, land, labour and organisation; but above all, a stubborn will to succeed. Besides, farming hitherto has been despised, unaided by the powers that be and regarded as the last resort for failures from other walks of life but who are too honest for absorption into the underworld.

But when a young chap with all the prospects of a comfortable white collar job abandons cozy life for one of continuous exertion and experiments, that one must be a visionary to know that the new line being trodden would eventually yield profits many folds.

Everyone now knows the cost of food particularly farm fresh products, and he who has a good variety of much-needed products is in money. But how many can pay the price and wait till the profit margin is reached? Quite a few.

One of such few is the farm director of Ajayi Farming Enterprises Limited, Ikeja, Lagos State.

Beautiful Vegetable Beds

To an unobserving eye, the scenery is just bush, ordinary thickets as one heads for Agege after sighting a few planes on the tarmac at Murtala International Airport, Ikeja. But a more careful study of the bil-

by Our Staff Reporter.

FARMER OF THE MONTH

SAMMY

BOSS OF AFE FARMS

lowing trees and pawpaw trees will reveal some orderlines in the bush, a further gaze will confirm that a well-organised farm is on there.

A two minute drive along Agege Motor Road from the airport, takes one to the main entrance of Ajayi Farming Enterprises Limited, owned and managed by a young unobtrusive Nigerian farmer.

The order and organisation on the farm would easily suggest an elderly someone but enquiries would reveal that the 'big farmer' one is looking for is the man among the workers himself busy passing orders and executing some of the instructions personally.

On entering the sixty-acre farm one comes into a forecourt with an administrative unit on the right. Here a well-organised office betrays the director's early life as a stenographer.

Quite in time with the rush for fresh products, a modern shop displays luscious farm products and provisions.

Behind this modern shop are rows and rows of crops. Here are stretches of lettuce, over there cuccumber, and yonder are tomatoes, pineapples and sweet pepper. The whole twenty-five hectare farm has been plotted out into sections of 35m x 17m with lanes in-between the plots.

Pawpaw trees line the lanes on one side at 3m intervals. The local vegetables plots raise spinnach, (sokoyokoto) and a wide variety of other species.

As in all up-to-date business es which must continually serve its customers perennially, the Ajayi Farming Enterprises Limited have water always. An artesian well oozes out water which is mechanically pumped out into a reservoir from where after treatment the water is stored in a tank.

Planned Farming

The Tank feeds the whole farm clean water for all purposes as pipes-lines have been buried in a grid system to cover all the plots. At regular intervals water storage concrete reservoirs stud the farm; from these small reservoirs and taps the whole farm gets a sufficient sprinkling of water. Cheerful labourers can be seen with watering cans going round the beds morning and evening.

The livestock division is no less interesting. Pigs, goose and geese as well as chicks are quartered neatly in their various ages.

In fact, life is a closed unit on Ajayi Farming Enterprises Limited; manure (droppings) from poultry section is spread on the beds where roughages are brought to feed the pigs.

A most interesting aspect of the activities on the farm is the nursery and experimental sections. Many foreign plants are grown in the nursery. On showing signs of adaptability to local conditions, such plants are again transferred to the farm on experimental basis.

Mr. Samuel Adebayo Ajayi,

Here, they are watched and studied until an assertion can be made on them.

One such plant is the Asperagus. It is a soft edible offshoot of a wiry plant. It takes about four years for asperagus, a much-relished foodstuff among Europeans, to mature.

It can be seen that much money would have gone into raising it before it comes to the market stall. Such a pioneering project is just one of a few of the bold schemes undertaken by the young manager.

Quick action, a necessary quality of good manager, is inborn in Mr. Ajayi. Before his poultry section could feel the pinch of feed and absolute dearth occasionally—a situation that had ended many poultry ventures—Mr. Ajayi wittingly set up a feed mill. From scratch, he has built up a renowned feed—AFE FEEDS—now a household word among livestock and poultry breeders.

Background

Mr. Samuel Adebayo Ajayi, 38, a Yoruba man from Ijebu-Igbo, Ogun State, had his early Secondary School training at Macjobs Commercial School Abeokuta.

In 1960 he won a scholarship in that School. By 1961 he had become a Bursar at St. Andrews College, Oyo, with Rev. Seth Irunsewe Kale former Bishop of Lagos, as Principal.

After a few months he was bored with routine work and had to shift to Lagos to put his secretarial qualifications to good test. So he became the Secretary cum Shorthand typist of the defunct Nigeria Fishing Trading Company Limited. That company soon folded up. Young Ajayi also folded up the idea of any sedentary job.

He took off for the United Kingdom to widen his horizon business-wise and returned in late 1962. Although a qualified stenographer he intuitively started a food supply service.

That was a most consequential step which he took.

Supply Service

Soon Ajayi was buying up almost all the Government Farms, Agege, were producing in fruits and vegetables and had much trouble in being allowed to do wholesale purchases. "These farms are for demonstration," the officers always told him.

But mother providence stepped in opportunity through one Mr. J.C. Miller, adviser to the then Western Government on Agriculture, who advised him to set up his own farms. So, to prepare himself properly, Ajayi flew out to Iowa State College, U.S.A. and had a proper grooming in farming at Plant City, Florida between 1963 and 1964.

By the middle of 1964 he was back to set up the present farms around kilometre 19 Agege Motor Road, Ikeja. In all, the farm then was a little more than 2 hectares but has

Continued on P 26

Who is a FAR... Asks ...

The basic difference between native vegetation and wild animal life on the one hand, and agriculture on the other, is the presence of a farmer. The energy of the sun hits the surface of the earth everywhere, whether any human being is present or not.

Wherever the temperature is right and moisture is present, plants grow and animals live.

It is man who takes control of this situation, learning to use the products of plant and animal life, modifying plants and animals and the nature of the soil to serve his purposes better, and the man who does this is the farmer.

In the operation of his farm, each farmer plays two roles. He is at the same time a cultivator and a manager.

The Farmer As a Cultivator

The first role of each farmer is to take care of plants and animals in order to get useful products. With respect to plant growth, this includes the preparation of a seedbed, the sowing of the crop, the elimination of weeds, the management of soil moisture, and measures for the control of pests and diseases.

With respect to animal growth, it includes controlling the breeding of livestock, herding and feeding them, protecting them from diseases, and, where necessary, housing them.

Some of these tasks are part of even primitive cultivation, while others are added step by step as farmers progress toward the establishment of modern farms.

Not only are new tasks or cultivation added as agriculture develops, such as the placement of fertilizer, the more careful application of irrigation water, and the application of insecticides and pesticides, but farmers have to learn to do the old operations of ploughing, seeding and weed control in new ways.

The Farmer As a Manager

The other role of the farmer with respect to the farm he operates is to be a manager. Whereas the skills of cultivation are mostly skills of the hand, the muscles, and the eye, the skills of management involve activities of the mind backed up by the will. They involve primarily the making of decisions, or choices between alternatives.

The decisions each farmer must make as a manager include choosing between different crops that might be planted in each field, choosing what livestock are to be kept on the farm, and deciding how to distribute available labour time among different tasks, especially at times of the year when several different tasks need to be carried out at the same time. They include choices as to what and how many draft animals are to be kept for work in the fields.

As agriculture progresses, the farmer must develop more and more skills in buying and selling. He must decide whether or not he will purchase improved seeds, fertilizers, insecticides, or new implements. He must decide how much of each crop is to be kept for home consumption and how much of it is to be sold. He must decide when to sell his products and to whom to sell them.

The managerial task of buying and selling are not a part of the role of the farmer in a wholly subsistence agriculture where no supplies are purchased and where all of the products are consumed by the farm family. But agricultural development depends on farms becoming more "commercial," with more and more purchases of production supplies and equipment, and more and more sales of products in the market.

The managerial tasks of farmers are made more difficult by the great variety of local soils and climatic conditions mentioned in the preceding article. If the soils of each farm in a region were just like the soils of all other farms in the region, if the slope of the land were the same and the effect of the sun were the same on lands sloping in different directions, then it would be possible to develop standard "recipes" for the most productive use of each field, and each farmer could be supplied with instructions from some expert as to what he should do and how and when he should do it.

But in the real world of widely varying agricultural conditions even within short distances, including differences in local prices of farm supplies and farm products, most of the managerial choices about the operation of each farm must be made by the operator of that farm.

Consequently, it is important to agricultural development that farmers grow in managerial ability so that they may competently take advantage of every opportunity open to them, each to make his farm as productive as possible, with an increasing margin between the costs and the returns of his farming operations.

Mallam Bako Mohammed Nasiru a Nigerian, an agriculturist in the U.S.S.R. Farmers have a lot of problems to contend with but usually receive little or no help from the Government. Unless something timely is done to encourage farming, qualified people like Mallam Nasiru may abandon a vocation to which they would have been devotees to the good of all.

The Farmer As a Person

The farmer is more than a cultivator and a manager. He is a person and a member of two groups of persons that are important to him. He is a member of a family and he is a member of a local community or neighbourhood. Much of what a farmer is as a person h...

MER?

Farming Correspondent

ves to his membership in
ose two social groups. Much
what he can do as an indivi-
al is determined by them.

As persons, farmers have
eir capacities of importance
agricultural development: to
ark, to learn, to think imagi-
atively and creatively, and to
spire.

It is each farmer's ability to
ork and to learn, at least to
e extent of mastering the
ills of cultivation practiced by
s father, that enables him to
the cultivator and the mana-
r of a farm.

It is the farmer's capacity
learn new techniques and
aster new knowledge beyond
at possessed by his father
at makes it possible for him
change his methods so that
griculture becomes more pro-
uctive. It is their capacity to
magine and create that enables
ome farmers to find entirely
ew and more productive ways
operate their farms.

To aspire, to long for some-
ing better than one has or is,
an be a powerful stimulant
nder certain conditions.

First, a person must have a
ision of a better way of life
hat he believes is possible for
him.

Second, to keep this aspira-
tion alive and make it a power-
ful drive, he must make enough
progress toward the goal that he
feels it worthwhile to keep
striving.

It is easy to make the mis-
take of thinking rural people
do not really want a better life
just because their aspirations
seem modest. But rural people
in poor countries are not alone
in this. Few of us "ask for the
moon;" what we aspire to is a
little improvement over what
we have, or are, at the present
time.

Include one that you consider progressive and one you consider backward. Ask yourself why one of them works (if he does). Ask yourself what, to your knowledge, each has learned in the past year. Why, in your opinion, has he learned that?

So far as you know, has any one of them developed a new way of doing something on his farm? To what does each of them aspire? What does he want or hope for from life? It would be better to do this for twenty farmers than for three, to insure a more realistic variety of persons, but three should illustrate what we are trying to examine here.

From this exercise, you can probably draw certain conclusions about farmers as persons.

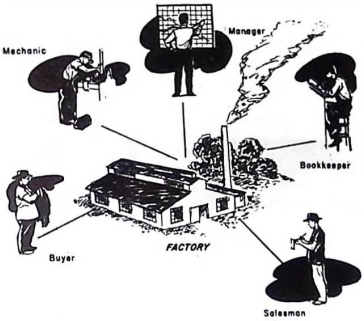
Farmers vary enormously as persons. Most of them work pretty hard. They learn a little, but not much, from year to year. They seldom develop new methods; for the most part they use the methods of their fathers and occasionally pick up a new one from neighbours. What they hope for from life may be a modest improvement on the past, or it may be simply that they be spared from hunger, illness, and the death of their children. They hope that they can keep the land they have or even that they can get a little more.

Meanwhile there are some farmers (usually few) who actively reach out for new methods, learn quite a bit from year to year, and look forward to a much better future.

There are also some who seem not able to keep up at all. They let the weeds grow and livestock wander. They fall further and further into debt. They have lost hope and they may lose their land.

Most farmers (like the rest of us) live far below their capacities. This is the second conclusion you probably can draw from thinking about farmers you know. They could learn much more than they do, if they had the opportunity and encouragement. They could try out more new methods than they do. Only a few of them are stupid, but almost all of them live largely by habit. They learn to do something in a particular way and keep on doing it that way, year after year.

This living by habit is not peculiar to farmers. We all do it. To a certain extent we all must do it. Habits are of enormous value. They free us from consciously thinking about the basic tasks of walking and talking and the simple manual operations of ploughing, sowing and eating that are so much of the activity of everyday life. They free our minds for more important tasks.



In factory production different persons perform specialized services.

Most farm operators must perform all functions.

Characteristics of Farmers

Think, for a few minutes, about three farmers you know.

Mental Habits

Three mental habits are particularly important to agricultu-

OFN: Can it succeed with the hoe?

asks Abiodun Ojugbele
Managing Editor, Farmstock Magazine

Perhaps the most topical economic issue nowadays is the 'Operation Feed the Nation;' the echo of this agricultural reawakening reaches the very limits of our country resulting in a general reappraisal of Agriculture.

Much as everyone is alert to agriculture what readily comes to mind is planting while breeding of birds, animals (cattle & rabbits) and fish are either forgotten or temporarily shelved. The idea of everyone planting something is an attempt at ensuring mass production. To achieve sufficient production thereby lowering prices, the hoe is the last implement to accomplish such a feat for obvious reasons.

In this jet age how many can stand the pain of bending to scratch on a tough bush in an attempt to clear an area for planting? Against the hoe is also time since there is a limit to how much can be cleared within a short time with a hoe.

Nevertheless, the hoe can still come in for some patches of land around the house or other small plots but when State Governments are spending huge sums of money on hoes and cutlasses definitely a misuse of money is apparent. Mass production does not entail an army of workers, but an organised few assisted by mechanical tools and equipment, to produce large quantities. While the OFN as a Scheme is commendable, it is hampered from the take-off by a few setbacks namely high cost of labour arising from the Udoji Award hence there is a drift from farmsteads since farmers cannot pay the high rates. In effect, the work of about 5 workers now devolves on one person.

The Northern parts of Nigeria which should serve as the Nation's grainery is also left to the hoe. Patches of subsistence farming a few metres thick skirting the roads are all that some places have naturally fertile soils.

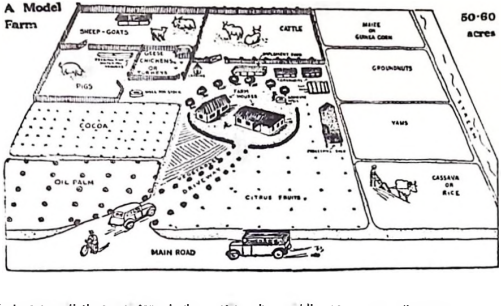
Flashback to the launching of Operation Feed the Nation by Lt-Gen. Olusegun Obasanjo at Doddan Barracks. On the left is Brigadier Yar Adua.

To cope with such a situation only mechanisation but not hand tools can help. All over the countryside, the only visible thing is the fertilizer, heavily subsidised for that matter nothing after that. But not everywhere needs fertilizers since can be noticed in any extensive tour of the northern states. In some places, the fever of OFN has died down completely.

Development Plan

But the OFN must succeed if properly prosecuted. From the launching of the scheme by the Head of State, Lt-Gen. Olusegun Obasanjo, a Development Plan Programme should have been evolved so that in a few years hence, all the facets of a planned agricultural revolution would have been touched.

The first year should be concerned with organisation of plots. Farmers are to be helped to acquire large plots either by fusion or purchase, such an exercise will go pari-passu with the traditional method of hoeing until tractors take over.



Each state will then register as many farmers as have acquired a minimum of (say) twenty five hectares (60 acres). Each farmer with so much land in a lump must have a tractor, it should be as simple as that.

The list will determine how many tractors are needed and where to locate Tractor Hiring Units for those who have large tracts but not up to twenty five hectares, such depots should be sited at nodal points.

Fertilizers, seeds and day-old chicks must be heavily subsidised so that the cost of products and chicks can be tolerable. As at now, only a few can afford an egg a day for each member of a family and far less can afford a chicken weekly. Until local grains are around plentifully all inputs must be subsidised by the State and Federal Governments.

Homesteads

The scarcity of cow meat prompted our late Head of State—General Murtala Mohammed—to start importation of meat from Argentina. Our foreign exchange is being reduced by the amount of imported meat while the exporting country's agricultural economy is being boosted on our stomach. While the exercise lasts animated organisation should be stepped up to stabilize our nomadic herdsmen in homesteads.

Besides, private ranches should be encouraged as in poultry. It is only when ranches are many that the cost of cattle can go down as well as all the bad practices by middlemen now. Most of our people now live on the hide—Ganda (Hausa) Kanda (Ibo) Ponmo (Yoruba)—although it is tasteless, non—nutritious and often-times the breeding ground of many animal skin diseases.

But for the burning and cooking, various diseases would have attacked many families as a result of eating Kanda. An enterprising fellow may start collecting old shoes to be turned into Ponmo any day and he will make money on our stomach.

Poultry

Of all our agricultural pursuits poultry seems to be the only well-organised not because any one wishes it to be so but because the industry is an offshoot of European systems. Those who go into it anyhow are usually stung.

Even then poultry needs a lot of helping. Feed accounts for about 70% of the cost of raising a chick either for table or egg production. Grains should be subsidised now. Imported day-olds are by far cheaper than local ones because feeds are heavily subsidised overseas.

If production must exceed consumption, then preservation becomes a desideratum. To produce broilers economically and profitably they have to leave the farm at about 10 weeks. Any extra day lowers the profit, toughens the meat and disturbs breeding the programme. Processing Plants at nodal centres to absorb chickens will boost production and stabilize prices.

Poultry has become a developed industry but no more the appendage of veterinary, as such, putting poultry under a Veterinarian is like asking a wood worker to supervise a metal furniture plant.

Extension Services

Government should concern themselves with Extension Services which are almost defunct now. Government servants should not handle production which hitherto has constituted a terrible waste of cash and man power.

Production cannot be handled with red tape protocol. Birds and animals die by the hundreds daily but salaries are sure. Local purchase Orders are issued for unnecessary stores and equipment for kick-backs.

Training is also part of Government concern. Primary School Leavers and any who wishes to go into Farming should have opportunities in Agricultural Schools. Workshops for the training of mechanics for Agricultural equipment should be studded all about important centres so that farmers do not have to look for them vainly due to long distances. Farmers too need be taught simple repairs.

The Cooperatives have their parts to play. They can handle purchasing, storage and marketing. It means that for them to come into the show they need some organisation.

Repayment of Loans

While farmers are to be helped with loans at reasonable interest rates, payment is better made in kind but not in cash. Several other countries have adapted the method of payment by farm products. Such a plan cuts off the avaricious middlemen and encourages the farmer to maximize production.

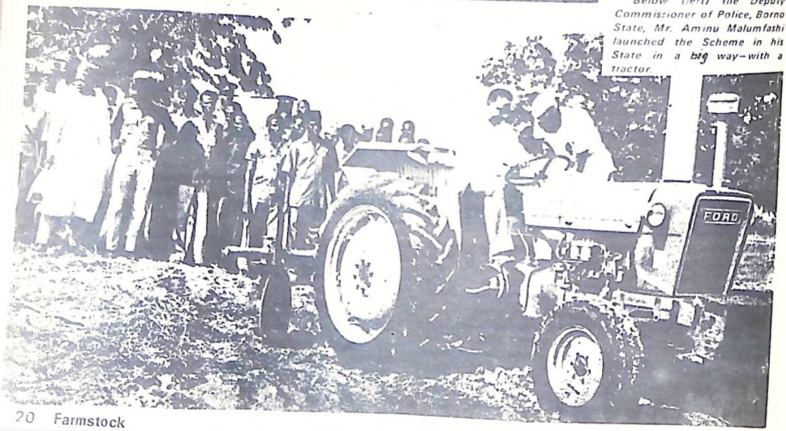
The hoe has played its part. It can still be used in some way but it cannot help the country now. So the switch must be to mechanised farming.

"Example is better than precepts" seems to be the opinion of the Lagos State Governor, Commodore Adekunle Lawal in picture (top left) when he visited Temu Agriculture Centre, Epe, recently to see the progress of the Operation Feed the Nation there. The Governor is seen tearing a bush down with a cutlass. Yes! the 'Operation Feed the Nation' has started with a right foot forward.

Religious sects have also found common grounds in the OFN. In top picture, Alhaji Sani Waliki (turbanned) village head of Barnawa, Kaduna State, teamed with the Spiritual Leader of the Cherubim and Seraphim Society, Mr. S.O. Kaleaiye to launch the Scheme in their area.

In the middle picture (left) the Oluwo of Iwo, Oyo State, with Lt. Col. E.A. Utuk of 6 Infantry Brigade, Akure, launched the OFN spearheaded by Ex-servicemen of the Oba's domain.

Below (left) the Deputy Commissioner of Police, Borno State, Mr. Aminu Malumfashi launched the Scheme in his State in a big way—with a tractor.

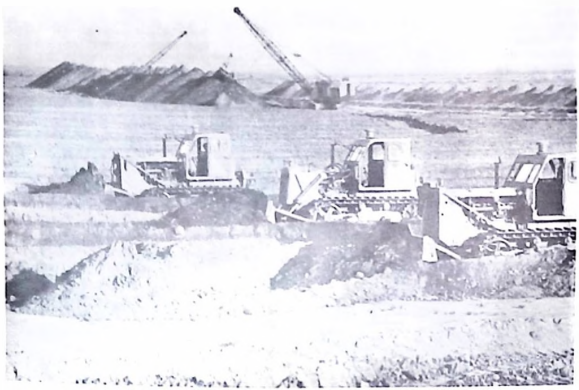


BRITAIN 'NETS' A NEW TRAINING CENTRE

Fishery development officers checking the rigging on a trawl before it is launched into a new tesk tank—the largest of its type in the world—which has recently been opened at the British White Fish Authority's fisheries training centre at Hull, Eastern England.

The tank is 31 metres long and 2¼ metres deep and enables very large mid-water trawls to be tested at one-fifteenth scale and traditional bottom trawls at one fifth scale. Towling speeds up to 13½ knots can be simulated.

The opening of the new centre with its 154,000 gallon (700,000 litre) tank will enable large scale models of trawls and other types of fishing gear to be demonstrated and tested. It will enable fishmen to see —how their trawls behave under operational conditions below the surface of the sea. They will be able to assess how changes for improvsd earning efficiency can be made and how their trawls are affected by external factors such as ship speed.



THE LARGEST ARTIFICIAL RIVER IN THE WORLD

Builders of the Karakum Canal (Central Asia) have passed the 970 kilometre mark. The world largest artificial river is moving ever father to the West. The Karakun Canal begins at the Amu Darya River in the Western part of the Turkmen Soviet Socialist Republic. It flows through the quicksands of the Karakun Desert, irrigates the fertile soil of the Marysky and Tejensky oases and now it is directing its course towards the subtropical districts in the south-western part of the republic.

Hydrotechnical work is continuing along the entire length of the Karakum Canal. In its first sections the canal is being widened and the water supply is being increased.

The operating canal track today irrigates 350,000 hectares of land.

The Karakum Canal has transformed the most arid republic of the Soviet Union (deserts occupy nearly 80 per cent of the territory of Turkmenia). If before the arrival of the waters of the Amu Darya Turkmenia produces less than 400,000 tons of cotton (its main agricultural crop), in recent years the cotton crop totalled one million tons. After Uzbekistan the Turkmen Republic has become the second biggest cotton producing republic in the Soviet Union. Agriculture which substantially improved due to the canal, had repair long ago all construction spendings.

Picture depicts construction of the fourth section of the Karakum Canal in Turkmenia.

THE NEW DALTON COW CALCULATOR

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PHOTO NEWS

We welcome pictures of Agricultural Events all over the Federation on this page. Publication is free please — Editor.

SCENTING OUT A WAY TO SAVE FOOD

As every female knows, there is nothing like an alluring scent to turn a virile male's mind to thoughts of love! But it could also help save the world thousands of tonnes of food each year. For attractive scientist Dr. Barbara Barratt, at the Zoology Department of Durham University, in north-east England is trying to isolate the "love" scent of a tiny beetle, the larvae of which causes havoc in a variety of stored foodstuffs and products including grain, flour, coffee, tea, tobacco, wood, leather and animal feed pellets.

The beetle is the tiny Stegobium paniceum, or biscuit beetle. In order to attract the male of the species, the female produces a sex scent which can be detected over varying distances. If Dr. Barratt is successful in isolating the smell, then she thinks it will be possible to reproduce it artifically. It could then be sprayed around warehouses, confusing the male beetles so that they could not locate the female or, saturating them with the small to an extent that they would no longer react to it. As the breeding period of the beetle is only six weeks and requires fairly high temperatures and humidity, Dr. Barratt believes an infestation could soon disappear.

ARTIFICIAL LAKES MAY BECOME NEW SOURCES OF FOOD

by Christine Griffiths

Inland fisheries on the huge man-made lakes provide an inexpensive and nutritious source of food as well as employment for large populations in Africa. As the water was filling in to create yet one more hydroelectric reserve lake behind the Cabora Bassa dam in North Mozambique, scientists were considering the most economical ways of establishing a local fishery. But given luck, nature would provide its own answer.

For the Cabora Bassa lake, eventually to encompass some 5,000 Sq. Km (2,000 Square miles) is feeding on the Zambezi river downstream from the Kariba dam in Central Africa. Behind the Kariba Dam lies another hydroelectric reserve lake and the site of an already well established fishery. "New Scientist," the authoritative London journal, explains how lake Tanganyika sardines were successfully introduced into Lake Kariba some years ago. The operation was expensive but worthwhile as catches of up to three tonnes per night are now possible by a single fishing unit.

Leader in fish farming

The journal reported that because of this success an attempt was made to introduce the sardines to the Cabora Bassa water. a great deal of time, trouble and money would have been saved and a readily exploited source of food would become available to the people of Mozambique.

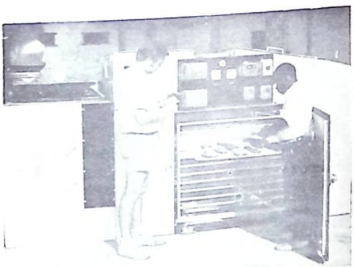
There are signs that this is already happening. Evidence that Kariba sardines have survived the hectic passage through the machinery of the power station suggests that they may well arrive and successfully breed in the new lake downstream.

British scientists observe the Cabora Bassa fish-watch with more than academic interest. Britain's own White Fish Authority is a world leader in fish farming and its specialists assisting colleagues in Africa and elsewhere are making an important contribution to commerce and development. One such specialist is currently engaged in the establishment of a similar industry in Trinidad. And the London-based Tropical Products Institute (TPI) recently established a fully equipped fish research laboratory at Namiasi in East Africa.

A recent TPI discovery which may soon be put to profitable use on Lake Cabora Bassa concerns the preservation of fish. Scientists found that fish caught in tropical waters will keep fresh in ice much longer than fish taken from temperate waters.

This means that fish packed in ice can be distributed widely in the period of its freshness, which may last up to three weeks. At present, most of the fish is sundried—but this is not possible in the three to four months of the rainy season. New techniques of smoking fish have also been developed by TPI in London and commercial introduction in East Africa is expected soon.

Two fisheries experts from Britain on the pier at Namiasi on Lake Malawi. Fish is the main source of protein in this southern African State and Britain provided aid to establish an effective government fisheries service.



A British fisheries expert inspecting smoked fish in the Torry smoking kiln at Namiasi on Lake Malawi. A study of fishing took place on the Lake and centralised fish landing was encouraged with the provision of freezing and cold storage facilities.

Continued from p. 17

THE FARMER, WHAT IS HE?

ral and all other kinds of) development.

● One is the habit of measuring, thinking in terms of amounts of things. This habit leads a person, in looking at a harvest, not to be satisfied with considering it a "good" harvest but to ask exactly how good it is in terms of kilograms, maunds, or bushels per hectare, bigha, or acre.

● The second useful mental habit is that of always asking why. Why is this crop better than that? Why is this field less fertile than that?

● The third is the habit of constantly looking for alternatives, for other ways of doing anything one has to do. Always considering alternative can become as much of a habit as always doing something in the same way.

But habits can also be a nuisance and an obstacle. They make it difficult to learn new ways of doing old tasks. They make it difficult to consider new methods. Persons frequently come to consider their habitual behaviour as an essential part of being themselves and feel they are traitors to themselves if they shift to a method suggested by someone else. All of us do this to some extent.

Habit is like friction in the physical world. Whether it is an asset or a liability depends on what is being attempted at the moment. Friction is an asset in the brakes of a bicycle or automobile, it is a liability between the moving parts of a pump or engine. With respect to agriculture, habit is an asset in carrying forward activities that have previously been learned, but it can be a liability with respect to the learning of new techniques.

But our main point here is that most farmers live far below their capacities as persons, and one of the tasks of agricultural development is to help them, and make it easier for them, to develop as persons so that they regularly use much more of each of the capacities they have.

The third conclusion you can draw from thinking about your farmer friends is really a group of conclusions about why they do the things they do, and are the way they are.

Here we cannot generalize very much and readers in different parts of the world will come to somewhat different conclusions because of the different societies (cu rest) in which they and their farmer friends live. Consequently, we shall state only tentative generalizations here, in the form of questions for each reader to answer for himself.

Is it not true that farmers farm for what they, themselves and their families, can get out of it either in goods or in personal satisfaction? Very few of them have any sentimental attachment to cultivation for the sake of cultivation.

Some of them genuinely "love the land" but they want more from cultivating it than pleasant exercise in a favourite setting. What all farmers want is food and fibre and money with which to buy other commodities for family use. They want family security.

They may in addition (and many of them do) get a feeling of pride and satisfaction out of doing their work well and even out of farming more successfully than their neighbours. They may get even more satisfaction if their achievements are recognized by others in the local community.

Shrewdness

Is it not true that farmers are so aware of uncertainties of the weather and of prices that they are reluctant to try a new method unless they are sure it will succeed? Much of the "conservatism" of farmers is pure shrewdness.

They are too smart to take chances, particularly if they have few savings, have small farms, and live near the margin of subsistence. To overcome this wise conservatism any new method proposed must promise very substantial increased returns.

Is it not true that most farmers place a high value on the goodwill and approval of their families and neighbours? Money is not everything. Friendship and social approval are important to most of us. We fear ridicule and we fear being shut out from the companionship of our fellows even more. Farmers share these feelings. Their behaviour reflects this. Part of the task of agricultural development is to take measure that shift the climate of social opinion from respecting those farmers who farm in the same old way to honouring those who climb to higher productivity through changing their methods even when this involves risky experimentation.

Is it not true that the most progressive farmers are those who have the most confidence in their own judgment and who may feel less personal need for the approval of others? They are less fearful of ridicule because they are sure that even if they make a mistake they can correct it and succeed the next time, or the next.

Such persons become the pioneers, the "innovators" in each society. While they seem to have less regard for the immediate approval of friends or neighbours, they are not unaware of it. They simply have confidence that in the long run they will succeed and gain this approval. Whether they actually receive approval in their lifetime or not, the progressive development of each society is actually led by, and built upon, the accomplishments of such persons.

Is it not true that farmers resent being pushed around and told what to do? All of us do. Farmers want to be treated as human beings, as persons, as intelligent, responsible persons. They can accept help and advice from others only to the extent that doing so does not violate their own self-respect and their own integrity as persons.

Continued from p. 9

POULTRY

les, and probably hypertension.

The supply problem is one reason why it often pays to start on a new site rather than take over an existing unit. Apart from numerous other good arguments from starting from the scratch, there is the difficulty of ensuring that the existing water scheme is accurately charted and soundly constructed.

Nearly all the rain that falls is lost by evaporation or through the transpiration of plants. Whether the remainder is saved depends largely on us as poultry farmers individually, and the nature of the soil. We should remember that water can be conserved on the farm by damming streams or excavating wells or reservoirs.

BABY RABBITS THRIVE

By rearing baby rabbits artificially in an incubator, scientists at the Roweit Research Institute in Scotland have reduced mortality during the first 14 days from 20 to only 3 per cent.

One of the difficulties of rearing rabbits in cages is that the doe has no instinct to retrieve her young and this can cause losses—the young are born without an external coat and, although blind, are able to propel themselves forward.

In the wild, they are born into a nest at the back of a tunnel whose shape causes straying pups to fall back into the warm nest, but in a rabbitry where nest boxes have to be big enough to admit the doe, it is easy for the young to stray and become chilled.

Continued on P 26

Farmstock

Continued from P 7

NEWS

He further said that as soon as fund was available, they would rare cattle and pigs, and develop fish ponds.

RIVERS STATE

If chemicals are wrongly applied to crops they become harmful. To this end, an experimental farm is now being planned to educate farmers on the usage of fertilizers. Such farms will be located in Ogba Egbema Division.

Announcing this, the chairman of the state's "Operation Feed the Nation" committee, Dr. N.O. Isirimah said it would reduce the problem of the application of fertilizers. He further disclosed that crops like pepper seedlings, corn and tomatoes would be distributed to farmers before the next planting season.

The material, he further said, would be sold at subsidised prices to farmers and free to schools that have farms.

BENDEL STATE

The group director of public affairs of Bifco Ltd. Lagos, has donated two units of agrochemical insecticide sprayer to the Bendel State Government. The present was made to the State's Commissioner for Agriculture and Natural Resources.

PLATEAU STATE

At the launching of the Operation Feed the Nation at Langtang, the Sole Caretaker Authority in charge, Alhaji Bawa Ahmed, announced that over 15,000 bags of fertilizers had been sold, adding that over 13,000 bags of fertilizers, 5,000 small hoes and improved seeds for sale to farmers at subsidized prices were still in stock.

He further disclosed that the division would be supplied with day old chicks, cages of poultry units, cutlasses, tractors and threshers. The items he disclosed were expected.

BENUE STATE

In the later part of september, the Yandev farm centre celebrated its golden jubilee. The Military Governor, Col. Abdullahi Shelleng declared the jubilee opened by unavailing its tablet.

Among the highlights of the ceremony was the crowning of Miss Mbakaren as Miss Yandev.

Distinguished personalities who attended included the Och'Idoma, Mr. Abraham Okpabi, the Atta Igala and the Tor Tiv, Gondo Aluor.

NIGER STATE

At the graduation ceremony of rice production staff at the National Cereal Research Institute at Pategi, near Bida, the Military Governor of the state, Col. Murtala Nyako advised that research institutions and organisations charged with the agricultural development to use farmers in carrying out their Operations.

He further said that if this advice was heeded farmers would be attracted to research innovations.

In a welcome address for the Governor, the Director of the Institute, Dr. O.A. Atanbe announced that 24 varieties of rice has been adopted for rice producing areas of the country.

BAUCHI STATE

The low agriculture production in Gombe area has been attributed to soil erosion.

This was disclosed by experts invited by the state Government to find out the ways and means of tackling the problem.

Announcing this, the Divisional agricultural officer Malam Jibrin Zwala said the experts were drawn from Ahmadu Bello University Zaria.

IMO STATE

Tractor hiring service has been introduced into the state's Ministry of Agriculture and Natural Resources.

Under the programme the Ministry will provide farmers tractors with ploughing instruments.

The state's Commissioner for Agriculture and Natural Resources, Dr. Martin Ijere, announced that the cost of hiring the tractors would be shared 50-50 by the state government and the farmers.

Continued from P 15

FARMER OF THE MONTH

gradually enlarged to about 25 hectares to date. Encouraged by sales, Mr. Ajayi has acquired about a thousand hectares in Ogun State to set up yet another showpiece of a farm.

Suggestions

Asked how he feels Government can help agriculture, Mr. Ajayi mused a while before giving his ideas as follows:-

(a) It augurs well for the nation that farming is now everybody's baby. The vocation is no longer downtrodden; as such, traders may flod the business and as a result create artificial scarcity of goods. To combat such, government trading depots become necessary where needed produce will be available at stable prices.

(b) Storage and refrigeration facilities now become imperative. Farmers need loans for building stores and erecting silos for preserving excess products for future sales.

(c) Financial aid become important. Farmers have no collaterals for loans. As soon as a farmer's plan is feasible i.e. has enough land for tractor work, he should be advanced loans at low interest rates.

(d) Poultry processing and packing units at nodal centres to absorb broilers and culled birds from poultry farms should be established.

(e) Each state should have well-located plant hiring services near the farmers.

(f) Farm Products Standardisation Units are to enforce strict adherence to agricultural laws i.e. harvesting of fruits so that consumers can have good products and farmers can meet world market standards thereby ensuring the refund of loans. At the moment, many unripe fruits are usually brought to the market.

Mr. Ajayi is always on the farm with his workers. In fact it is usually difficult to find him in his office as he is always working with them.

The Farm's Contract Supply Service is aided by pick-up vans and a 24 hour telephone attendance on 31021 and 32526.

Mr. Ajayi and his family live on the farm—a very comfortable life replete with all that goes for soft-living—radio, television, refrigerator, a well furnished parlour and a charming wife.

Continued from P 25

BABY RABBI

The scientists at the Rc took advantage of two ch teristics of the wild rabbit w developing their rearing tec que.

One is that, from the sec day after giving birth, the suckles her young only onc 24 hours, usually early in morning.

The other is that the yo lie dormant until disturbed the wild, by the arrival of t doe to feed them.

To reduce losses from str ing, chilling and unproduct disturbance by the doe, t nest boxes containing the litte were removed to an incuba where they were slotted li drawers, one above the othe and were kept warm and und turbed all day and all nigh

Each morning, the box were taken out in the batche of about six and presented turn to their mothers in the cages.

By this time, the mamma glands of the does were full o milk and this (and the arriva of the nest full of active pups seemed to stimulate them to jump into the nest, let down their milk and feed the litte immediately. In a few minutes they jumped off again.

The boxes were then removed from the cages and each pu was examined to make sur that it had been fed.

If not, it was marked with a felt pen and fostered with another litter, thus receiving a second chance to feed.

The technique proved so successful, especially with batch mating and litters born within two or three days of each other, that the institute has now made an incubator big enough to accommodate 42 nest boxes, each made of transparent polycarbon to permit inspection without disturbance.

The temperature of this incubator is controlled thermostatically while a small fan is fitted for ventilation.

Another advantage of the incubator system is that it redu ces heat requirement, which can be an important factor in times of high fuel costs, for it is only the new-born pups that require supplementary heat.

COOPERATIVES

NEW GOALS OF SOVIET CONSUMERS' COOPERATIVES

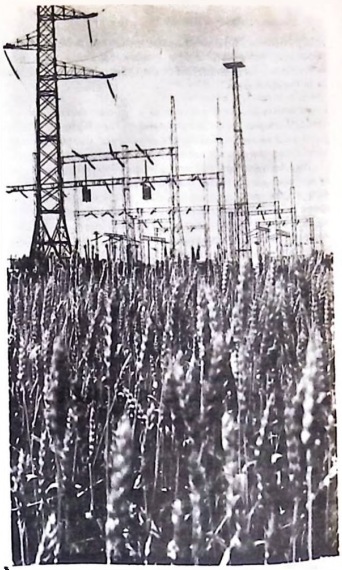
By Y. Zaostrovsky

Until recently both Agriculture and Cooperatives have been Cinderella ventures in our midst; i.e. these pursuits have been despised. While some pretences have even featured in the establishment and running of Agriculture much as a show piece than a gainful venture, Cooperatives have always been the sick babies of their functionaries.

Farmstock has spread its tentacles as widely as possible to bring the experiences of Cooperatives, globewise, to all our readers. As more foreign Cooperation matters come in they will be published timely for comparative study by all with a view to improving ours generally. Following is a Comprehensive write-up on the aspirations, scope and modus-operandi of Cooperatives in the Soviet Union.

The 25th CPSU Congress set important tasks in raising the Soviet people's living standards and cultural level. In accordance with its decisions, the consumer cooperatives are to play a big

Continued on P 28



ELECTRICITY FOR THE VILLAGE

One could hardly find in the Soviet Union a state–or collective-farm to which electric transmission lines have not been extended. During the 1971-1975 period alone about one million km of transmission lines have been erected in the countryside.

The Soviet state has undertaken to connect collective farms to the state power systems on easy terms–the price of one kWh is one kopeck (1.25 cents). Now 97 per cent of collective-and state farms have been connected to electric transmission lines.

Farm workers use electricity in the most labour-consuming processes, such as preparation of fodder, cleaning and loading of grain, milking of cows, repairing of agricultural machinery. The transition of agricultural production to an industrialised basis is taking place at a fast rate. Large-scale consumption of electricity collective farmers every day life enables them to enjoy all the benefits of city life–many houses have radio-sets, Tv-sets, refrigerators, and washing machines.

The growth of electricity consumption in agriculture of the USSR has become possible due to the country's increased power resources. In 1975, the Soviet Union produced about 1,000 billion KWh of electricity.

The picture shows a new subsystem in the collective farm "Bolshevik" Rostov Region (the South of Russia).
Photo by Y. Komissarov. APN.

GOVERNMENT WILL PROP COOPERATIVE

The Secretary of the Oyo State Government Mr C.S. Akande had disclosed that the Federal Military Government intended to involve the Cooperative Movement actively in all its future schemes with a view to reaching the masses. The fact was disclosed at a three day Conference of Registrars Cooperative Societies held recently in the University of Ibadan. He also added that the Nigerian Cooperative Movement was not intended to be a mere chapter of a foreign ideology or concept but a virile body contributing substantially to the people's progress.

In effect, the Registrars were implored to exploit all avenues to achieve the target of 25% coverage for nation-wide activities involving Cooperative expected by the FMG. As a guide, Mr. Akande listed what Government expected of the Cooperative namely:

(a) Formation of more Cooperative Societies.
(b) The exact role the Cooperatives want to or are playing in the OFN.
(c) The best means of government help to Cooperatives
(d) Constructive educational programme.
(e) The relationship between the Cooperatives and the Nigerian National Supply Company.

Responding fittingly to the address, Mr. J.O. Taiwo the Federal Registrar of Cooperative Societies thanked the august guest speaker for his able address which would receive their attention forthwith.

Continued on P 27

role. Possessing a ramified network of shops, procurement and processing enterprises, as also a public catering system, Soviet cooperatives serve about half of the country's population, mainly in the rural areas.

Operating in the conditions of a socialist system, the consumers' societies make a considerable contribution, with state assistance, to improving the life of the rural working people and eliminating the distinctions between the city and the countryside.

The Soviet villager has now the opportunity of buying at the cooperative shop all that the urban retail trade carries. Currently 40% of the washing machines, 52% of the bicycles, 90% of the motorcycles with sidecars and 50% of the passenger cars provided by the country's trade network are sold in villages.

A considerable amount of ready-made clothes, knitgoods and leather footwear sold falls to the share of the cooperatives. In the current 10th Five-Year Plan period (1976-80) the Soviet cooperatives are to boost their sales by 27.29 per cent.

COOP Goods

A big place in the activities of the Soviet consumer cooperatives is their own production of foodstuffs and manufactured goods, which makes it possible to meet more fully the demands of the rural population. Their enterprises supply the population with bread, confectionery, sausage, beer, soft drinks, wine, clothes, footwear, store equipment, furniture—in all, more than 50 different kinds of consumer goods.

In 1975 alone the cooperatives' enterprises produced more than 1,350 million tins of foods, and baked about 11 million tons of bread. The cooperatives also occupy themselves with the propagation and supply of fish, fur production, and gathering nature's gifts—mushrooms, berries, etc.

The programme for raising the welfare of the people adopted by the 25th CPSU Congress indicates the ways and means for the further development of cooperative production activities, for increasing the output of goods and improving their quality. Implementing the Congress decisions, the cooperatives have decided, for instance, to increase by 1980 the output of tinned goods by 23 per cent, culinary and confectionery items by 50 per cent.

One of the functions of Soviet consumer societies is the procurement of surplus farm products both from the collective farms and the population. Last year the cooperatives bought up about 15 million tons of such products, which were put on sale at their shops in cities and villages, sent to public catering enterprises, and factories producing tinned goods, juices and other foods. In 1980 the volume of the procurements will increase by almost 20 per cent as against 1975.

Retail Network

In a word, goods bearing the brand mark of cooperative enterprise will significantly increase, their assortment will broaden and the quality improve in the 10th Five-Year Plan period. To ensure the sale of these goods, the efficiency of the retail trade network has to be raised. That is why Centrosoyus (the leading organization of the Soviet consumers' cooperatives) has drawn up a programme for the further development of trade for 1976-1980.

Just as in the preceding years, a course will be followed for the stepped-up construction of big trade centres. Specialized shops for the sale of furniture, books, children's goods, as also stores for newlyweds, are to be opened in the countryside. This will make it more convenient to do shopping, providing faster service without any trouble in finding what the customer needs. The plans envisage opening up at least a thousand fish and over two thousand vegetable and fruit stores.

Catering enterprises not only selling food but also serving dinner and supper now form part of the rural landscape. The cooperative dining rooms, cafes, restaurants and lunch bars already cater to more than 20 million people.

Care for the interests of the rural population is seen in the initiative shown by cooperative workers in organising the centralised supply of semi-prep food produced by large e prises for rural dining ro Setting up such basic ente ses, the cooperatives the solve several problems simu neously: the organisation o steady supply of products dining rooms in the close v nity, improvement in the q lity of the prepared food a what is most important, prov ing bette service for the ru people.

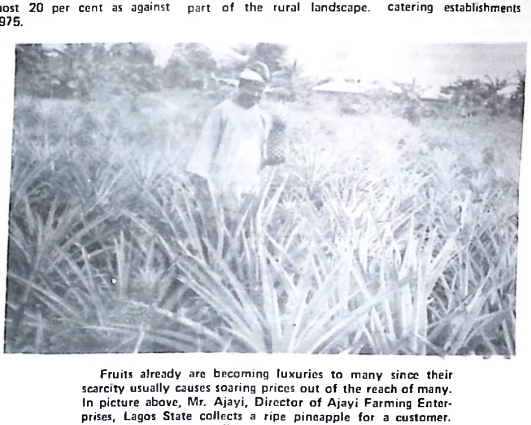
Centrosoyuz plans, in t main, to put all the pub catering enterprises of the d trict centres on this supp method in the 10th Five-Ye Plan period.

Field Work

During the spring sowin and harvesting periods tens o thousands of employees of th cooperative shops and publi catering establishments leav

for the fields, tractor brigades and livestock farms. In 1976 the sowing campaign was served by 50,000 shops and dining rooms "on wheels."

At the request of peasants the goods ordered are delivered to their homes. In spring and



Fruits already are becoming luxuries to many since their scarcity usually causes soaring prices out of the reach of many. In picture above, Mr. Ajayi, Director of Ajayi Farming Enterprises, Lagos State collects a ripe pineapple for a customer. "There is never enough," snapped the successful farmer. The Cooperatives can step in to improve conditions.

summer fairs are held for the sale of farm implements, fertilizers, work clothes, shoes and other items of mass demand.

The Soviet cooperatives coordinate their activities with collective and state farms in improving rural life, the living conditions of the villagers. They jointly build trade and public catering establishments, and Houses of Culture. For instance, a bakery, a tinning plant, and a three-storey trade centre consisting of a department store, food shop and cafe, was built this way at the Ukrains Collective Farm in Khmelnitsky Region of the Ukraine. The construction of a fruit storage house and a refrigerator plant is nearing completion.

The tinning plant built there was led to the development of the farm's vegetable production, and to an increase in the output of food for the population. The plant's products are divided between the collective farm and the region's cooperative organization proportionally to the funds invested. And the enterprise is managed by a council consisting of representatives of both the farm and the cooperative.

Pawpaw is also a luxury, funny to say so. Cooperatives should step into fruit production too.

Social Services

Besides trade shops the cooperatives put up medical establishments, schools, houses, sanatoriums and holiday homes, kindergartens, creches and stadiums. In the main this construction work is conducted on the funds provided by the cooperatives and mainly by their own building organizations.

The Soviet consumers societies readily share their experience in serving the population with their counterparts in other countries. Centrosoyuz is developing trade with cooperative organizations and firms of 39 countries. In 1975 alone the Centrosoyuz's trade with the developing countries rose by almost 9 per cent against 1974.

Guiding itself by the decisions of the 25th CPSU Congress, the Centrosoyuz Board has drawn up a programme for further cooperation with such organizations in other countries, including the young countries, in the 10th Five-Year Plan period. The export of Soviet consumers' cooperatives will, at the least, double during this period. This will serve to establish broader ties with the cooperative organizations of other countries in the interests of the working people, in the interests of peace, democracy and social progress.

COOP SHOPS

The cost of the various development projects being carried out in this country today is largely derived from oil revenue. The ordinary man can only benefit from the oil boom if something is done to ease the high cost of living in the country.

The Price Control Board has not succeeded in stabilising prices. The only way out is for the Federal Government to set up Co-operative shops in the country where things are sold at fixed prices.

If the government will establish such shops, they will be of great assistance to the poor.

Susana Giwa, KADUNA.

MUTUAL INSPECTION AT THE ROYAL SHOW!

The examination seemed to be a two-way affair, when two members of a party of Nigerian agricultural officials stopped to inspect sheep during their tour of Britain's Royal Agricultural Show at Stoneleigh, in the midlands of England. They are Mr. John Antigha (left), an agricultural engineer, based in Calabar, Cross River State and Mr. John Ganna, engineering manager of the Agricultural Development Corporation, Ilorin, Kwara State.

The Nigerians spent, a great deal of time touring the show—Britain's premier agricultural event—where they looked at farm machinery, livestock, poultry and storage equipment and had discussions with manufacturers and experts in many areas of farming.