



Department of  
Primary Industries and  
Regional Development

## Journal of the Department of Agriculture, Western Australia, Series 3

---

Volume 5  
Number 5 September-October, 1956

Article 3

---

9-1956

### Caponising cockerels

D. K. Giles

R. Vagg

Follow this and additional works at: [https://library.dpird.wa.gov.au/journal\\_agriculture3](https://library.dpird.wa.gov.au/journal_agriculture3)

---

#### Recommended Citation

Giles, D. K. and Vagg, R. (1956) "Caponising cockerels," *Journal of the Department of Agriculture, Western Australia, Series 3*: Vol. 5: No. 5, Article 3.

Available at: [https://library.dpird.wa.gov.au/journal\\_agriculture3/vol5/iss5/3](https://library.dpird.wa.gov.au/journal_agriculture3/vol5/iss5/3)

This article is brought to you for free and open access by the Agriculture at Digital Library. It has been accepted for inclusion in Journal of the Department of Agriculture, Western Australia, Series 3 by an authorized administrator of Digital Library. For more information, please contact [library@dpird.wa.gov.au](mailto:library@dpird.wa.gov.au).

## CAPONISING COCKERELS

By D. K. GILES, Poultry Adviser, and R. VAGG, Poultry Instructor.

**B**ECAUSE of its tenderness, succulence and delicate flavour, the flesh of the capon has long been held in high regard by epicures in many lands. Over three centuries have passed since Shakespeare wrote of the portly justice whose "fair round belly" was "with fat capon lined," but throughout the years capons have usually commanded high prices from discriminating consumers of table poultry.

Originally, a capon was a castrated cockerel—a bird from which the testes had been surgically removed causing it to become permanently sterile. Today, an effect similar to surgical castration may be obtained by using chemical compounds—synthetic female sex hormones—which suppress the male hormones normally secreted by the testes. While the male hormones are thus "blanketed," the cockerel shows marked female characteristics and resembles a bird from which the testes have been removed.

As a table bird, the capon has definite advantages over the entire cockerel. The carcass is usually plumper on the breast, the skin is softer and smoother, and the meat remains tender, juicy, and delicately-flavoured even if the bird is allowed to reach an age when the entire cockerel's flesh would be tough, stringy and strongly-flavoured.

In experiments conducted recently at the Poultry Research Station in this State, cockerels which had been chemic-

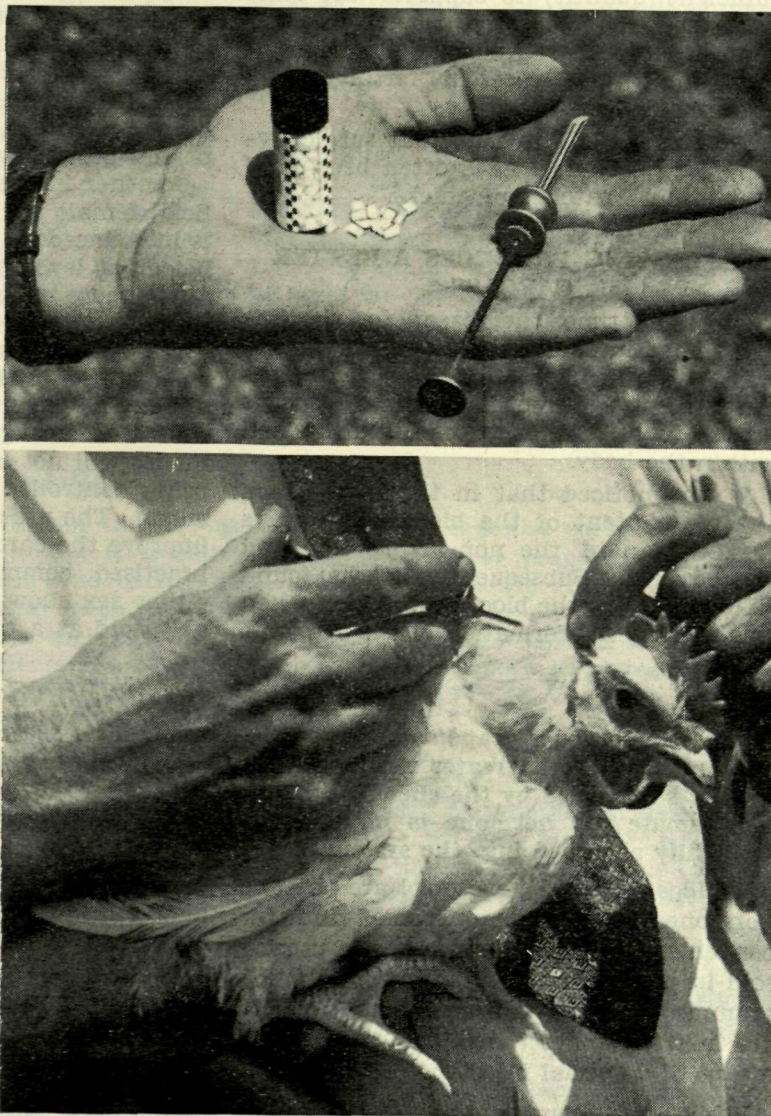


Fig. 1.—The top picture shows the outfit used in chemical caponising, the hexoestrol pellets and the pellet implanter. Below, the pellet is being inserted beneath the skin of the neck.



ally caponised with hexoestrol at the age of 12 weeks showed an eight per cent. gain in body weight at the age of 16 weeks, when compared with untreated birds of the same ages, fed and housed under identical conditions.

Birds which have been caponised either surgically or chemically, lose their aggressiveness and become more effeminate in appearance and conformation. In the chemically-caponised birds these effects are usually temporary, lasting only as long as the female sex hormone is available in sufficient quantity to suppress the male hormone. Once the level drops below this point, the cockerel's normal sex characters—and in most cases his fertility—may gradually be restored.

It is interesting to note that surgically-caponised cockerels have often been used to "mother" batches of chicks.

### **CAPONISING PRODUCES A BETTER CARCASS**

For some time, the reason for the improvement in carcass quality from capons was not fully understood, but more recently investigations have shown that it is due to a difference in fat utilisation within the body.

It was noticed that in the laying hen, the fat content of the blood was always higher than in the non-laying hen and the cockerel. Subsequently it was found that this fat in the blood of the laying hen was used in the formation of the egg yolk.

This led to the discovery that the blood fat level was as high in the surgical capon as in the laying hen, but in the case of the capon, most of the fat was diverted to abdominal deposits, while a small quantity was distributed in the body muscle. At the same time, the skin of the capons became much softer and smoother than in the non-capon. The muscular fat was responsible for the better flesh quality, and the improved skin texture enhanced the appearance of the carcass for market.

Changes, similar to those resulting from surgical caponising, may be induced by implanting synthetic female sex hormones in sufficient quantity to suppress the naturally-produced male hormones. This method of chemical caponising is rapidly becoming standard practice on many properties producing table poultry.

Another interesting feature of the artificial female sex hormone is that, when it is introduced into the non-laying hen, the blood fat level is increased to levels similar to those in the laying hen, as described above. In this case, there is no yolk to utilise this excess blood fat so that it has to be stored in the body in a similar manner to the capon. The introduction of an excess of this group of female sex hormones will not induce laying, this activity being controlled by another body mechanism. The use of female sex hormones to improve the carcass quality of hens is not practised commercially as any bird of either sex showing signs of age is invariably sold at a discount.

### **CHEMICAL CAPONISING**

**B**ECAUSE surgical caponising demands a fairly high degree of skill, takes more time and involves a greater risk of injury to the birds it has, during recent years, been largely superseded by the chemical method. In chemical caponising, a pellet containing the female sex hormone is implanted beneath the skin of the bird so that it is gradually absorbed into the system.

Stillboestrol and hexoestrol are the two hormones most commonly used and for convenience of treatment they are usually sold in pellets each containing a 15 milligramme dose of the drug. These pellets are inserted under the skin of the bird by means of a special injector.

While the consumption of excessive quantities of female sex hormones could have undesirable effects on some human

beings, research indicates that very large quantities of capon meat would have to be consumed continuously to produce these ill-effects.

As a precaution against receiving excessive dosages, however, the hormone pellets are implanted in a part of the bird not used for human food—usually in the top of the neck just below the comb. This ensures that any residues are disposed of when the head is removed.



## TIME OF TREATMENT

If cockerels are chemically caponised between the ages of eight to 12 weeks, a single pellet will usually suffice except when it is desired to carry the birds to a heavier weight than would normally be required. The marketing date is usually about four weeks after caponising.

Where heavyweight birds are required, it may be advisable to postpone the hormone treatment to the 12th week and then implant two or three pellets. As the bird grows older, the testes secrete more of the male hormone and consequently a larger dose of the female hormone is needed to suppress the male characteristics.

Where prices show a tendency to fluctuate an alternative would be to implant a single pellet between the ages of eight to 12 weeks and a second pellet later if it is desired to hold the birds until a more favourable market is assured. This of course would entail extra cost for labour and pellets. The treatment should in any case be carried out before the bird develops spurs. The carcass trade demands a bird without spurs, otherwise it is classed as a "stag."

## SURGICAL CAPONISING

**O**VER 2,000 years ago, Roman farmers used to surgically caponise cockerels to produce better table birds and it is believed that the Chinese practised a similar form of caponisation at an even earlier date. Today, despite the greater simplicity and rapidity of the chemical method, there are still a number of poultrymen who prefer to surgically caponise their birds. Although the operation requires some degree of specialised skill, the effects are permanent and the birds may be reared to any desired age and weight consistent with profitable marketing.

The caponising operation entails the removal of the testes which are situated inside the body cavity, one on each side of the backbone.

Sets of caponising instruments, which may be purchased from most suppliers of poultry requisites, usually include a scalpel or knife for making the first incision, a spreader for holding the ribs apart, a probe fitted with a hook for tearing the membranes enclosing the abdominal organs, and special forceps for grasping and removing the testicles. Weighted cords for restraining the bird during the operation are sometimes included, but, if not, these may easily be improvised.

## IMPLANTING THE PELLET

The pellet containing the female sex hormone is implanted between the skin and the muscle by means of a special injector consisting basically of a hollow needle fitted with a plunger.

The pellet is placed in the needle and a fold of loose skin on top of the neck just below the comb is pulled away from the neck with the thumb and forefinger. About half an inch of the needle is inserted under the skin with the point directed towards the head. The plunger is pressed to eject the pellet and the needle is given a quarter-turn to ensure that the pellet is left in position when the injector is withdrawn.

## DOSAGE

Hexoestrol is now preferred, as birds treated with this preparation usually show an increase in body weight. Most manufacturers supply pellets containing 15 milligrammes of hexoestrol which can be used in the standard injectors made for this purpose.

One pellet is a suitable dose for a cockerel up to 12 weeks old but two pellets may be required if the bird is older.

The operation is not a particularly difficult one to perform, but beginners would be well advised to practise on dead cockerels until they are familiar with the anatomy of the birds and are able to carry out the work quickly and cleanly.

## SELECTION OF BIRDS

Birds to be surgically caponised should be selected from healthy vigorous stock showing about half an inch of red comb development. At this stage, the testes will be about the size and shape of large plump grains of wheat. The degree of maturity, rather than the age, should be



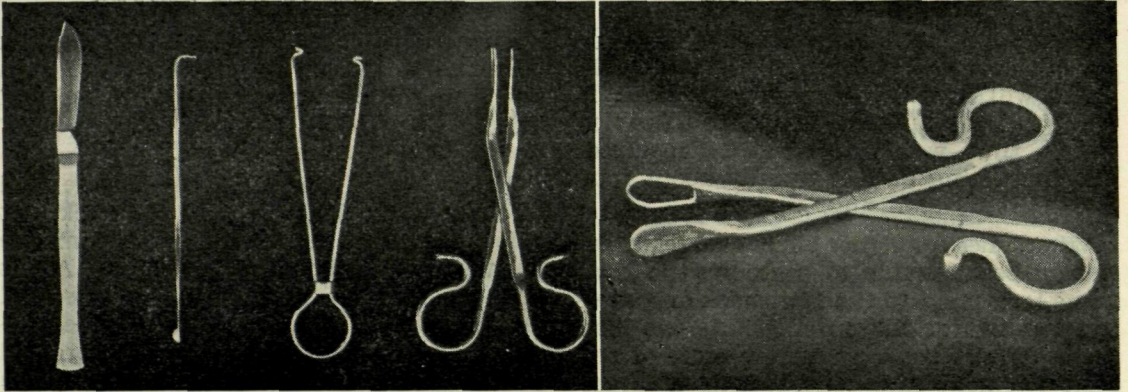


Fig. 2.—Instruments used in surgical caponising. Left to right—Scalpel; Probe with hook for tearing peritoneal membrane; Rib spreaders; Testicle-removing forceps; Forceps showing loop and plate on jaws.

the determining factor but this stage of growth is usually attained between the ages of six to eight weeks. Older birds may be caponised but the operation entails greater risks and the set-back to the birds' growth is correspondingly more severe.

### PREPARATION

Food should be withheld from the birds for at least 14 hours, and water for six hours, prior to the operation. This ensures that the intestines are almost empty and have an opportunity to settle away from

the testes and body walls, thus reducing the risk of punctures and affording a better view of the sex glands.

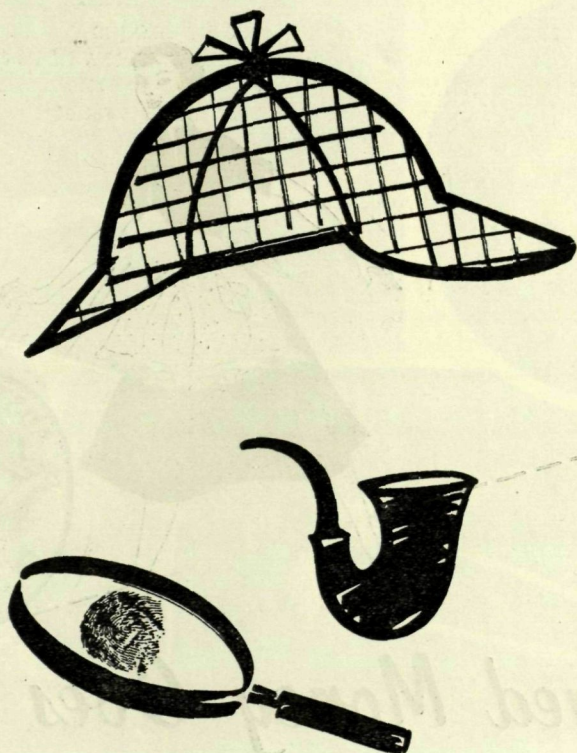
### PERFORMING THE OPERATION

The bird is laid on its side on a box or small table. A weighted cord is attached to the legs by two half-hitches, or any simple easily-released knot, and a similar weighted cord is looped round the wings close to the body. The weights hang over the edges of the table or box so that they exert a slight pull in opposite directions



Fig. 3.—Bird in position for surgical caponising. The legs and wings are secured by weighted cords and feathers are plucked from the site of the incision.





**There is only one . . .** a unique powerful personality, renowned for his brilliant methods of detection. Shell scientists used similar methods to discover I.C.A . . . and solved the problem of power-robbing pre-ignition and spark plug "miss". Shell patented\* I.C.A is the unique power-releasing chemical in highest octane Supershell. For high and mighty performance *there is only one motor spirit* — Supershell with I.C.A. How can you prove this? Elementary, my dear Motorist ! Do as one out of every three Australian motorists do — drive in to your Shell Dealer today. Ask for Supershell with I.C.A . . . the most powerful petrol you can buy !

**SUPERSHELL HAS BOTH  
HIGHEST OCTANE AND I.C.A.**

\*Containing tri-cresyl-phosphate. Aust.  
Patent No. 152857.



The Shell Co. of Aust. Ltd.

MS 5614 D





## Managed Money Goes Farther

Open also a

### SAVINGS ACCOUNT

All branches of the "R. & I."  
now accept SAVINGS accounts.  
Save a little every week for  
the things YOU want in life.

Open a  
CHEQUE  
ACCOUNT  
at the...

When expenditure is controlled by means of a Cheque Account, house-keeping is much more simple. It enables an accurate record to be kept of income and expenditure, and lessens the temptation to overspend. Any branch of the "R & I." will explain the simple procedure to you.



# The Rural & Industries Bank

OF WESTERN AUSTRALIA

HEAD OFFICE: 555-573 HAY STREET, PERTH



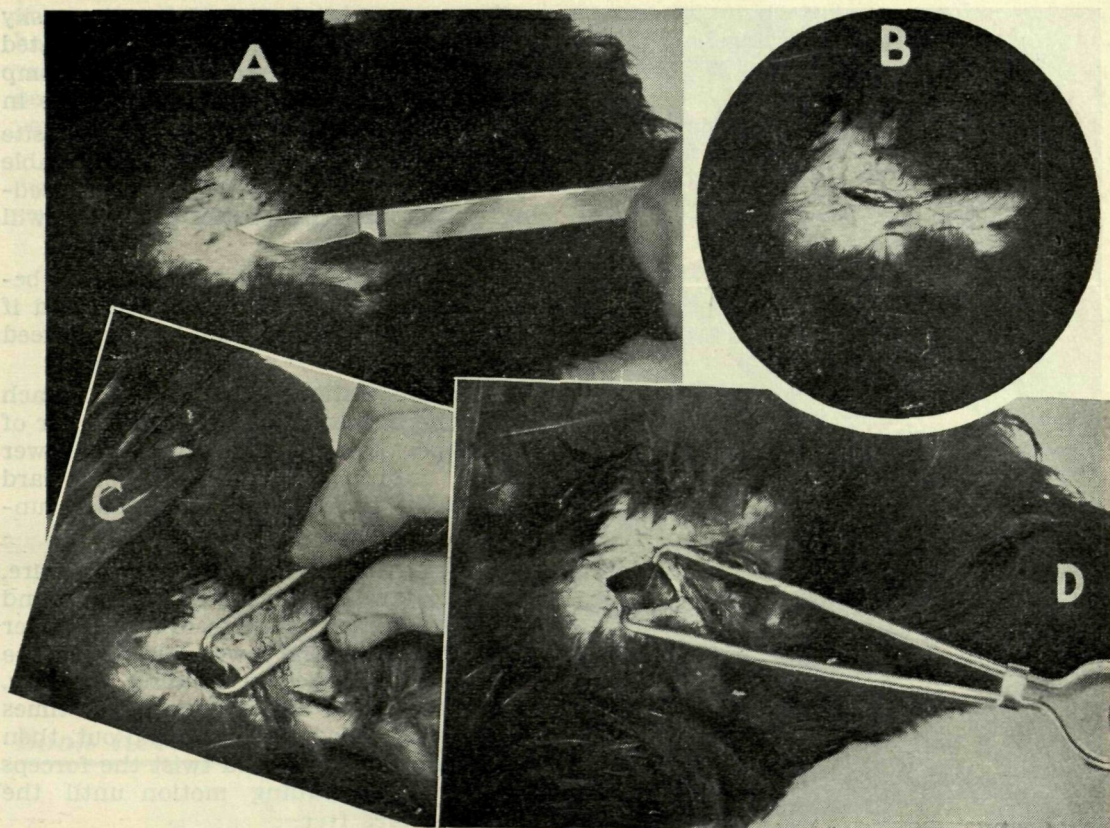


Fig. 4.—A,—Commencing the incision between the two last ribs; B,—The incision completed; C,—Inserting the rib spreader; D,—Spreader in position.

(See Fig. 1). Weights of about 1 lb. each should suffice as they should be only heavy enough to hold the bird securely without undue stretching of the body.

Pluck the soft downy feathers from a space between the hip and the rib. Moisten the remaining feathers if they persist in getting in the way.

Now place the middle finger of the left hand on the bird's hip and draw the skin towards the head. While still holding the skin taut, feel for the two ribs nearest to the hip, using the forefinger of the same hand.

The incision is made between these two ribs. If made between the second and third ribs from the hip, there is a risk of injuring the lungs. If made between the last rib and the hip the incision is too far back for easy removal of the testes, and may cause injury to the leg muscles.

### Making the Incision.

Stand facing the breastbone of the bird. Having drawn the skin towards the left, or head of the bird and located the space between the last two ribs with the left forefinger, press the point of the knife firmly through the skin and flesh at a point between the ribs and not less than  $\frac{3}{4}$  in. from the backbone.

If the birds have been deprived of food as previously recommended the knife point can enter the body cavity to a depth of  $\frac{1}{4}$  in. without risk of puncturing the intestines.

The knife should be held with the cutting edge towards the operator and the handle sloping away from him.

Cutting towards the operator and slightly upward, the incision should be lengthened to about  $1\frac{1}{4}$  in. by a firm confident cut.



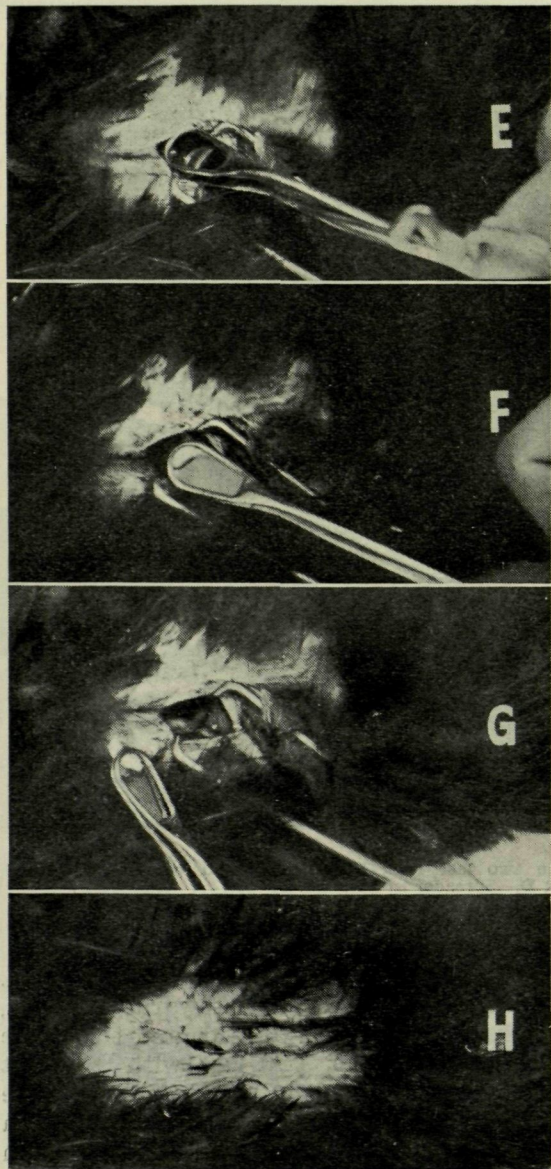


Fig. 5.—E—Inserting the forceps; F—Testicle held between jaws of forceps; G—Testicle removed by twisting and gentle traction; H—The operation completed and the spreader removed.

The spreader is inserted with one hook round each rib and the wound is gradually widened until the opening is  $\frac{1}{2}$  in. to  $\frac{3}{4}$  in. across. The spreaders are locked at this point.

The abdominal cavity is lined with a delicate, glistening peritoneal membrane and the hook end of the probe is used to tear this open to expose the testes and intestines.

The upper testicle should now be easily visible as a light-coloured, elongated organ about the size and shape of a plump grain of wheat. The lower testicle lies in a corresponding position on the opposite side of the backbone, and it is advisable to remove this first so that if any bleeding occurs, the site of the operation will not be obscured.

The spermatic artery is located just behind and attached to the testicles and if this artery is ruptured, the bird will bleed to death.

With the testicle forceps closed, reach under the backbone slightly to the rear of the upper testicle and lift the lower testicle into view. Do not press hard against the backbone as this causes unnecessary suffering to the bird.

Still exerting a slight upward pressure, open the jaws of the forceps slightly and allow the testicle to slide over the upper jaw and rest on the lower jaw. Close the jaws to give merely a holding pressure, move them from side to side a few times to allow the blood-vessels to slip out, then close the jaws firmly and twist the forceps with a gentle pulling motion until the testicle comes free.

Once the lower testicle is removed, there should be much less difficulty encountered in freeing the upper testicle which is much more accessible.

If, as occasionally happens, it is very difficult to locate and remove the lower testicle, leave it in position and remove the upper one only. When this is completed, turn the bird over and make a second incision on the other side, through which the testicle can usually be removed without difficulty.

Some operators always make the two incisions, but to save time and avoid unnecessary injury to the birds it is better to remove both testicles through the one incision wherever possible.

### AFTER CARE

When the operation is completed and the bird released, the skin should slide over the cut and no further attention should be necessary.

Birds should be placed in a warm shed with food and water immediately avail-

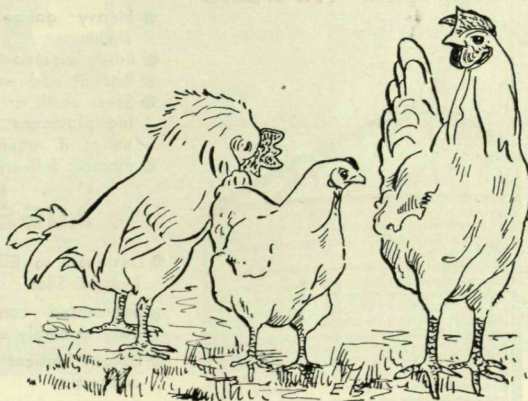


able. As flying or jumping may delay healing, the feed hoppers and water vessels should be at ground level and perches should be low or may be dispensed with altogether.

A proportion of the birds may develop "wind-puffs" after a few days. These swellings are caused by air being trapped

under the skin near the site of the operation. They are treated by piercing the skin over the swelling with a clean, sharp-pointed instrument and allowing the air to escape.

Infection of caponising wounds is rarely encountered and in most cases complete healing is achieved in about ten days.



## **Book Review.**

### **A DIRECTORY OF SCOTTISH AGRICULTURE**

**P**ASTORALISTS and farmers of Scottish ancestry, and those who contemplate a visit to Scotland in the near future, will find much that is interesting in "The Annual Farming Digest and Agricultural Directory of Scotland"—the 1956 edition of which recently came to hand.

In addition to a number of short articles on various phases of Scottish agriculture, the Directory contains some well-produced photographs of Scottish beauty spots and a mass of useful information of interest to farmers all the world over.

For livestock owners there are notes on the origins and development of many breeds of cattle, horses, ponies, sheep and pigs together with a description of their show points. A list of breed societies, pedigree stock-breeders and descriptions of some notable stud stock farms make this section a particularly valuable help to the tourist from overseas.

Details of Government departments, marketing boards, research and educational institutions, Chambers of Commerce, show societies and agricultural organisations as well as business and pro-

fessional associations are included in the Reference Section and there is a comprehensive buyer's guide, listing the classified trades in each county.

For the women folk there is a feature on Scottish cookery describing the preparation of such dishes as Scotch broth, lang kail, cullen skink, potato soup, "tatties an' herrin'," Forfar bridies, Pitcaithly bannock, potato and oatmeal cake and a host of other recipes.

A comprehensive index makes for easy reference to the mass of information contained in the 408 neatly-printed pages.

"The Agricultural Directory of Scotland—1956 Edition" is available from the publishers—Mearns Agricultural Publications, 7-9 Union Row, Aberdeen, Scotland and the price is 10s. 6d. sterling.—J.M.



**Your OWN Grain Storage!**

# LYSAGHT Grain Silos

**READY TO  
ASSEMBLE**

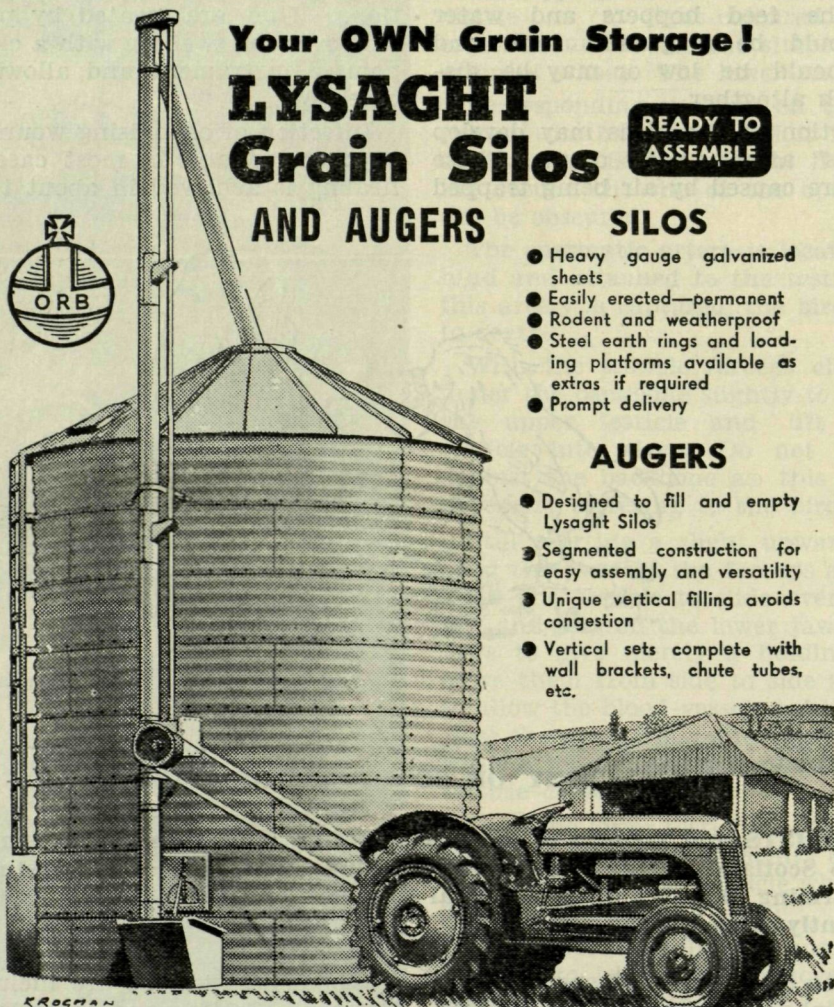
## AND AUGERS

## SILOS

- Heavy gauge galvanized sheets
- Easily erected—permanent
- Rodent and weatherproof
- Steel earth rings and loading platforms available as extras if required
- Prompt delivery

## AUGERS

- Designed to fill and empty Lysaght Silos
- Segmented construction for easy assembly and versatility
- Unique vertical filling avoids congestion
- Vertical sets complete with wall brackets, chute tubes, etc.



**AUGERS.** Priced as low as £111. Popular type for standard 2,000 bushel silo, on ground level (motor not provided), £138.

### PRICES (Ex Fremantle Store)

200 Bushel Silo	£53
500 " "	£86
1,000 " "	£152
2,000 " "	£233
2,000 " " (Squat)	£233
3,000 " "	£302
3,500 " "	£329
4,500 " "	£505
8,500 " "	£778

### DISTRIBUTED IN WESTERN AUSTRALIA BY:—

Dalgety & Co. Ltd., Perth  
Elder Smith & Co. Ltd., Perth  
Goldsbrough, Mort & Co. Ltd., Perth  
Katanning Stock & Trading Co. Ltd.,  
Katanning

Harris, Scarfe & Sandovers Ltd., Perth  
McLean Bros. & Rigg Ltd., Perth  
R. A. Reilly & Co., Narrogin  
Westralian Farmers' Co-operative Ltd.,  
Perth

MANUFACTURED BY—

**LYSAGHT'S WORKS PTY. LTD., Newcastle Works, N.S.W.**

55X/WA