

AR
00767
1963
QAG

4-293a
DEPARTMENT OF AGRICULTURE
AND COLONIZATION

Animal Productions

POULTRYMAN'S GUIDE



ARCHIVES DU MAPAQ
NE PEUT PAS ÊTRE EMPRUNTÉ

ROGER J. PAIEMENT, Agronome

August 1963

Publication 293A



POULTRYMAN'S GUIDE

by

Roger J. Paiement, Agronome

FORWARD

Every progressive poultry keeper constantly strives by means of skill and good management to derive a higher return for his work and investment.

The pursuit of this aim leads him to fill the gaps and avoid the mistakes that increase his production costs.

He is always on the watch for new developments, because he knows that methods of production and marketing keep pace with scientific progress and technical improvement.

For those who are bent on making a success of poultry husbandry, this Guide sets out clearly and concisely the recent basic findings of poultry science and experimentation.

These details are intended as landmarks for the present guidance of poultrymen who wish to find or keep to the path of success.

It is hoped that this handbook will be consulted frequently and that it will encourage readers to refer to fuller sources of information.

PROPRIÉTÉ de la bibliothèque A-1654 (8)
Ministère de l'Agriculture, - Québec

Prêté à _____

Date _____

PRÊT: 2 SEMAINES

S.V.P. RETOURNER

AVERAGE YIELDS AND PRODUCTION COSTS OF POULTRY ENTERPRISES

KIND OF POULTRY	LAYING BIRDS	BROILER CHICKENS	ROASTER CHICKENS	BROILER TURKEYS	HEAVY TURKEYS
Lenght of time kept	14 to 18 months	8 to 12 weeks	16 to 20 weeks	12 to 16 weeks	20 to 24 weeks
Minimum performance for profitability	18 dozen eggs per bird	3.8 lb per bird, live weight	7 lb per bird, live weight	8 to 12 lb per bird, live weight	16 to 22 lb per bird, live weight
Feed conversion (pounds of feed per pound of product)	4.2 per dozen eggs	2.4 per lb of live weight	3.2 per lb of live weight	3.4 per lb of live weight	4.5 per lb of live weight
Capital expenses (depreciation, maintenance, taxes, insurance, interest on investment)	3.3 cents per dozen	1.5 cents per lb	2.1 cents per lb	2.1 cents per lb	7.2 cents per lb
Variable costs (electricity, heating, labour at \$60 a week, litter)	4.4 cents per dozen	1.5 cents per lb	1.8 cents per lb	3.1 cents per lb	3.6 cents per lb
Fixed costs (feed, medicaments, vaccines)	18.5 cents per dozen	16.4 cents per lb	21.8 cents per lb	20.6 cents per lb	26.0 cents per lb
Depreciation of bird	8.3 cents per dozen				
Total costs (1)	34.5 cents per dozen	19.4 cents per lb	25.7 cents per lb	25.8 cents per lb	36.8 cents per lb

(1) These production costs include interest calculated at 6% on capital invested in buildings and accessories, and an annual salary of \$3,000 for labour, per unit of production.

AVANTAGES AND DISADVANTAGES OF DIFFERENT BROODING SYSTEMS

	ADVANTAGES	DISADVANTAGES
Electric	Only slight temperature variation Easily regulated Small risk of fire Healthy form of heating Chicks easily trained	Expensive way of heating Risk of power failures Litter damp under brooder Insufficient ventilation Requires supplementary heating in very cold weather
Infra-red lamps	Same advantages as electric brooders, plus Good ventilation Litter dry under brooder	Expensive way of heating Risk of power failures Requires supplementary heating in very cold weather Chicks disturbed by the light Hastens sexual maturity Dries out plumage
Propane gas	Easily regulated Steady temperature Small risk of fire Needs little supervision	Litter damp under hover Supplementary heating needed in cold weather Need for good ventilation to get rid of gaseous combustion products
Coal	Good source of heat Permits good ventilation Dependable Economical Small risk of fire	Requires more supervision Difficult to regulate in changeable or warm weather Temperature variation of 4 or 5 degrees (but not harmful)
Oil	Easily regulated Suited to all seasons Requires little supervision	Danger of fire Incomplete combustion of fuel Smells badly if poorly regulated
Wood	Good source of heat Cheap fuel	Hard to regulate in warm weather Requires close supervision Danger of fire

SPACE AND EQUIPMENT: RECOMMENDATIONS PER 100 BIRDS

Period	HENS AND CHICKENS				TURKEYS AND POULTS			
	1 to 3 weeks	4 to 9 weeks	10 to 16 weeks	Mature birds	1 to 3 weeks	4 to 9 weeks	10 to 16 weeks	Mature birds
Floor space	50 square feet	100 square feet	200 square feet or one third of an acre of range	250 square feet	100 square feet	200 square feet	400 square feet	600 square feet or one acre of range
Feeder space	15 linear feet	25 linear feet	30 linear feet	A) ordinary type: 40 feet B) automatic type: 30 feet C) tube type: 5 feeders	20 linear feet	35 linear feet	40 linear feet	A) ordinary type: 50 feet B) automatic type: 40 feet C) tube type: 8 feeders
Watering space	3 linear feet or two of the one-gallon founts	4 linear feet	5 linear feet	8 linear feet or two automatic waterers	6 linear feet	8 linear feet	10 linear feet	12 linear feet or four automatic waterers
Nests				25 individual nests or 30 square feet of community nest				20 individual nests or 60 square feet of community nest
Roosts		40 linear feet	50 linear feet	60 linear feet		80 linear feet	100 linear feet	120 linear feet
Artificial lighting	10 watts	40 watts	40 watts	60 watts	25 watts	40 watts	40 watts	60 watts

DAILY RATION PER 100 BIRDS

AGE	MEAT-TYPE BIRDS	PULLETS	TURKEYS	LAYING BIRDS
1 to 3 weeks	For first two days, only finely cracked grains or crumbles. Then, for broilers, starter crumbles with a protein content of 20 to 22%. No grain after the third day.	For first two days, only finely cracked grains or crumbles. Regular starter mash or crumbles with a protein content of about 20%. No grain.	For first two days, only cracked grains or pellets. After that, feed pre-starter mash containing 26 to 28% protein, with a little small grain and groats.	<u>Mash and grain</u> Free access to 18%-protein laying mash plus 10 lb of oats, or to 20%-protein laying mash plus 15 lb of oats. Reduce proportion of oats when appetite or egg production decline and when birds are too fat. Increase proportion of oats when birds are thin or during cold spells.
4 to 9 weeks	For broilers, mash or crumbles with a 17 to 20% protein content, or feed broilers fattening pellets after the sixth week. Use the same starter mash for cockerels. No grain.	Regular starter mash or pellets with a protein content of about 20%, 2 to 4 pounds of oats free choice; or Regular, complete-ration mash or pellets, containing about 18% protein.	From 8 weeks on, feed broiler turkeys finishing pellets containing 18 to 20% protein. For heavy turkeys, feed complete ration growing pellets containing 18% protein, or growing pellets containing 20% protein with an equal quantity of grain.	<u>Complete mash</u> Free access to laying mash containing about 16%-protein. No grain. If egg production or appetite diminish, add a supplement of 2 to 4 lb of pellets or crumbles containing 20% of protein.
10 weeks and over	Growing mash or crumbles with a 15 to 18% protein content, or starter feed and a little grain for heavy cockerels.	Regular growing mash containing 18% protein, and 5-8 or 6-10 pounds of oats according to age or Regular complete mash containing about 14% protein or Regular complete mash at rate of 13-15 lb if 13% protein, 12-14 lb if 18%, or 10-12 lb if 20%.	18%-protein complete ration ("finishing" for broiler turkeys, "growing" for large turkeys) or 20%-protein growing pellets with an equal amount of grain. At 16 weeks, 14%-protein, complete ration finishing pellets or similar pellets containing 16% protein plus equal quantity of grain.	<u>Restricted feeding</u> Difficult system to use. Feed a complete 16%-protein laying mash at the rate of 25 to 28 lb for birds of light types, and 27 to 32 lb for birds weighing 5 to 7 lb; when rate of lay is over 70%, increase by a few pounds.
	Water: plentiful. Grit: ½ lb per day, of a coarseness suited to age.	Water: plentiful. Grit: ½ lb per day, of a coarseness suited to age.	Water: plentiful. Grit: ½ lb per day, of a coarseness suited to age.	Water: plentiful. Grit: 4 lb per week. Oystershell: 3 lb per week in a hopper plus one lb per day in the mash.

MANAGEMENT OF BROILERS, ROASTERS, AND PULLETS

AGE	TEMPERATURE	LITTER	MISCELLANEOUS RECOMMENDATIONS
1 to 3 weeks	Start the brooder two days before chicks arrive and maintain temperature under edge of canopy at 95°F. Reduce temperature 5°F per week. If chicks huddle close to stove, increase heating.	One inch of straw or dry shavings. Cover litter with paper during first ten days.	Have brooder house thoroughly cleaned, and disinfected with one pound of lye per 10 gallons of water or with some other effective germicide. Arrange feed-troughs and drinking fountains like spokes of a wheel around the brooder. Check thermometer and thermostat. Move confining screen farther back every day and, after a week, remove it. Do not try to raise more than 300 pullet chicks or 500 meat-type chicks at a single brooder. Block-off corners. Maintain humidity in the pen at 45%. Wash drinking fountains. Watch flock carefully for signs of disease. Change sites of feed-troughs. Prevent crowding and provide troughs and fountains as needed.
4 to 9 weeks	Maintain a temperature of 70°F in brooder house. If birds crowd into corners, reduce heat. Provide heat mainly at night. Raise canopy so as to heat a larger area.	Turn litter over often, adding a few inches of fresh litter. Remove wet litter from beneath drinking fountains and feeders.	Place a feeder or drinking fountain every 6 feet. Remove one third of beak with a debeaker. Accustom birds to roosting. Ventilate building well. Remove sick birds at once. Follow a programme of preventive vaccination. Do not allow visitors. Modify ration to suit development. If birds have access to range, maintain pasture plants at height of 4 inches by mowing. Use only recognized medicaments against diseases for which they are recommended, and in dosage suited to age of birds. Watch ventilation so as to maintain right temperature especially in hot weather. Prevent crowding and provide fountains and feed hoppers as required.
10 weeks and over	Maintain temperature of 65°F in the brooder house. Increase air circulation to lower temperature. Avoid overheating especially in summer.	Remove areas of wet litter and spread four inches of fresh litter.	Remove manure piles. Sell chickens as soon as they reach desired age. Treat birds against internal and external parasites. On range, move shelters often; have rainproof feed hoppers, and keep drinking fountains in shade. Promote air circulation. Remove sick and dead birds. In case of disease, have sick birds examined. Prevent crowding and provide fountains and feed hoppers as required.

MANAGEMENT OF LAYING BIRDS

PERIOD	HOUSING	FEEDING	MISCELLANEOUS RECOMMENDATIONS
Starting to lay	Roosts and nests should be 18 inches from floor. Paint roosts with a product which will destroy lice and mites. Do not overcrowd the pen. Make sure enough space is provided at hoppers, fountains, and nests.	Place a fountain or feed hopper every 15 feet. Keep feed hoppers not more than half full. Make changes in rations gradually. Do not overdo restricted feeding.	Edges of hoppers and fountains should be at level of birds' backs. Treat flock with a good vermifuge or vermicide. Trim beaks if necessary. Natural light only (no artificial lighting at this stage). Keep birds in complete confinement. Keep records of egg production.
Intensive egg production	Keep nests clean. Ventilate so as to keep litter dry. Provide enough fittings and equipment. Get rid of vermin. Scatter lime on droppings under roosts. Make sure that water fountains work properly and do not overflow. Replace moist areas with fresh litter.	Store mash in a dry, cool place. Keep to a regular routine in tending the flock. Provide fresh water and clean the fountains often. Follow feed manufacturer's recommendations. Provide granite grit and oystershell.	At the beginning of each month, increase morning period of artificial lighting by 15 minutes. In the middle of each month, increase evening period of artificial lighting by 15 minutes. Maintain temperature between 45°F and 70°F. Cull often to remove birds which show signs of disease or of having stopped laying. Keep an eye on the birds' flesh and fat condition, and modify their ration accordingly. Maintain appetite with vitaminized products. Calculate the per cent lay.
Declining egg production	Put feed hoppers on the roosts and in places where the birds congregate.	Stimulate consumption of feed by giving birds extra feedings of pelleted mash. Increase percentage of protein in ration: if grain is fed, reduce the proportion.	Artificial lighting 24 hours a day. Sell birds which have finished laying: keep those that show a tendency to continue. Make careful calculations to find out whether flock is still profitable.

TO PRODUCE EGGS OF HIGH QUALITY

A - MANAGEMENT IN THE POULTRY-HOUSE	B - PROPER FEEDING
Have plenty of clean litter in nests and on floor. Keep birds off dropping boards and pits by means of wire-netting. Keep birds in confinement. Collect egg 4 times daily. Do not put too many eggs in one basket. Handle eggs carefully with clean hands. Do not keep cocks with the hens unless eggs are intended for incubation. Provide enough nests. Move about cautiously in the poultry house and avoid noisy tasks, because over-excitement in the flock leads to blood spots in eggs. Maintain temperature between 45°F and 75°F in the poultry house.	Feed a well-balanced ration as regards proteins, minerals and vitamins. Do not feed greenstuffs or corn that give yolks an undesirable colour. Keep birds in good condition, neither too fat nor too thin. Have separate hoppers for granite grit and oyster shell. If egg shells are fragile, add 4 pounds of oyster shell and 4 pounds of grit per 100 birds per week to the mash, and feed extra cod liver oil. Do not make excessive use of medicaments and tonics.
C - STORAGE	D - MARKETING
Place eggs in wire baskets and store in a clean, cool room at a temperature of 55°F and 75% relative humidity. Do not put eggs in cases on the day they are laid. Avoid storing in a room without ventilation or where there are strong odours. Keep eggs away from substances that are liable to decay. Do not hold eggs longer than one week.	Do not wash eggs unless they are soiled, and then wash with a special product. Preferably, clean eggs with steel wool. Pack eggs, large end up, in clean cases, boxes, or trays. Sell or deliver twice a week. Do not ship broken or thin-shelled eggs. Sell in accordance with established grades. Protect eggs from freezing and sudden changes in temperature. Choose a mode of transportation which will not expose eggs to shocks and breakages.

MANAGEMENT OF TURKEYS

AGES	TEMPERATURE	LITTER	MISCELLANEOUS RECOMMENDATIONS
1 to 3 weeks	Start brooder two days before poults arrive. Check operation of thermometers and thermostats. Temperature should be 100°F under edge of canopy and 75°F in the brooder house. Reduce by 5°F a week until it reaches 70°F. Surround stove with a guard one foot high, 18 inches from canopy. Move guard away from stove one foot per day.	Spread 3 inches of coarse but absorbent litter, and keep it covered with jute sacks during the first four days. Watch the birds to see that they do not eat litter.	Start poults feeding as soon as possible. Serve them pelleted mash on cardboard or on jute sacks laid on the floor and in small troughs. If the birds eat little and do not drink, scatter fine grit on the mash and put coloured glass marbles in their drinking fountains. Block off corners completely and leave two electric light bulbs on all night. Prevent waste and contamination of feed around hoppers by only half filling them. Do not overcrowd the brooder house (not more than 300 birds per brooder).
4 to 9 weeks	Observe behaviour of birds before lowering temperature. Protect from direct drafts. Do not remove stove until birds are well feathered and weather is warm enough.	Turn litter often and remove damp patches. Let the birds go outside if weather is suitable and soil is perfectly dry.	Distribute fountains and feed hoppers well over the entire floor space. Choose hoppers whose capacity and height match the needs of birds of this age. Follow a recommended feeding regime. Provide continuous supply of insoluble grit, and plenty of fresh water. Clean fountains often. Provide shade if range is used. Prevent crowding. Trim one third of upper beak with hot debeaker.
10 weeks and over	Protect birds from sudden changes of temperature or strong, direct sunshine. Ventilate their living quarters well.	Add a few inches of litter.	Watch the birds' condition. Increase consumption of protein - rich mash if gain in flesh is unsatisfactory, or increase the grain ration if they are lacking in fat. Examine all dead birds to discover cause of death. Treat against intestinal worms and follow programme of vaccination if necessary. Install flat roosts. Sell birds when they reach desired weight. It pays to sell females a few weeks earlier than males.

Bibliothèque Cécile - Rouleau



QMC A 521 219