

Broiler Chicken Farming



Management of Birds

Birds from day old chick to slaughter should be well managed and provided with good environment in order to get maximum farm output. The factors that affect farm output are chick quality, feeding management, feed quality, health management and farm environment. Stress should be avoided to prevent low productivity and diseases. Quality chicks grow well. Feed and drinking water given should be of high quality. Each bird should be provided with enough floors, feeding and drinking space. Feeder and drinker height should be suitable to bird's age. This will avoid stress, wastage and ensure uniformity of bird's size.

Waste Management

Farm waste includes rubbish, carcasses, chicken dung and litter. These waste materials attract flies, pests and cause bad smell. Improper management of waste material can cause environmental pollution and become disease agent to the birds.

Farm Location

Selection of farm location is important. The following are the criterions used to determine farm location.

- i. Farm should be far away from town and housing area
- ii. Farm should have access to transportation and be able to operate all the time
- iii. Farm should be far away from other farms
- iv. Land should be flat and have good drainage
- v. The area should be well ventilated

Housing

Poultry houses should provide conducive environment to birds and economic.

- i. Materials used have to be of high quality, lasting, easy to clean and do not absorb excessive heat
- ii. Trees and buildings should not hinder house ventilation
- iii. House design should provide good ventilation
- iv. House design should facilitate workers to manage birds and cleaning activities

Feedmills

There are 47 feedmills operating in Malaysia. 38 feedmills are located in Peninsular Malaysia and 9 are located in Sabah, Sarawak and Labuan (Appendix 2). Raw materials such as corn and soy bean are imported from China, United States and Argentina.

Disease Management

Disease reduces farm productivity. Operational cost would increase due to the use of medication, death, slow growth and downgrading of carcasses. Disease prevention measures such as biosecurity and vaccination has to be taken. The use of drugs/medication has to follow instructions to avoid residues and drug resistant.

Vaccines and Medication

There are a few companies which supply medication and vaccines to farmers. Most of the items are imported.

Good Animal Husbandry Practice

Good animal husbandry practice covers various aspects of chicken farming. It covers farm planning, disease control and daily farm management / activities. Good animal husbandry practice could increase farm productivity, minimize production cost, maximize farm outputs and provides clean environment and quality products. This will give confidence to consumers, increase market opportunity and provide a competitive and sustainable farming.

Technology

New technologies have already been introduced in broiler chicken industry. These technologies are able to minimize manpower, increase farm outputs and increase the efficiency of disease control.

- i. Close housing system with controlled ventilation provides cool and conducive environment to birds. These facilities involve high overhead and operational cost (e.g. electric). However less floor space is needed and more chicken is could be reared. Close housing system is able to help in pest-born diseases. Evaporative cooling system and tunnel ventilation are the most common method used and farmers need to have some knowledge to operate and maintain the equipments.
- ii. Automation is also used for feeder, drinker, vaccination etc.

Farm Equipments

Farm equipments such as feeder, drinker and cages are produced by local manufacturer. However certain modern and sophisticated equipments such as incubator and hatcher are imported by local distributors.

Marketing

Chickens are marketed in the form of live bird, slaughtered and frozen, chicken parts or ready to eat products. More than 80 percent of broiler chicken is sold live in the wet market. 15-20% of broiler chicken are slaughtered and processed in the slaughterhouse.

1. Local Market

Approximately 85 percent of poultry meat are marketed locally. Most of the meat is sold as fresh meat in the wet market and supermarket or to hotel and restaurant. For big companies the poultry meat from slaughterhouses is sent to their own service centre before being distributed to retailers all over the country.

a. Transport

- i. It is important to minimise heat stress during transportation of chicken. Chicks exposed to heat stress can cause high mortality, slow growth rate and high susceptibility to diseases. Closed ventilated truck is used for transportation of chicks. Long distance transportation of chicks is normally done at night.
- ii. Poultry meat is highly perishable when exposed to high temperature. It has to be transported using refrigerated truck.

b. Vehicles

- i. a. For chick transportation, some companies provide their own transport and some companies buy services from other companies which follows certain specifications.
- ii. a. For adult chicken, transportation is usually provided by farmers, wholesalers or other companies which have contract with transport services. Fee charges depend on number of chicken and distance.

c. Chicken Price

Broiler chicken is a controlled item. Poultry meat price is influenced by ex-farm price, wholesale live bird price, wholesale processed bird, retail live bird price, retail processed bird price with legs, head, liver and gizzard and without legs, head, liver and gizzard. Ceiling prices for ex-farm and retail prices are fixed. Reference price is fixed by broiler chicken producer association. The actual price is influenced by market factors but not exceeding ceiling price. The actual price might be different from reference price depending on location, distance, marketing system and supplier. Broiler chicken price fluctuates below production cost due to market influence. Profit-loss in this industry could not be measured by using one production cycle only but measured by the yearly average production.

Broiler chicken Farm Price and Production Costs

Year	Farm Price (RM/Kg)	Production cost (RM/Kg)
1996	1.45 - 3.05 (2.61)	2.50 - 3.06
1997	2.05 - 3.05 (2.69)	2.70 - 3.32
1998	2.40 - 3.50 (3.14)	2.79 - 3.40
1999	2.10 - 3.50 (3.00)	2.60 - 3.05

2. Export Market

Approximately 12-15% of total broiler chicken produced is exported (table 7). 85% are exported live and the remainder is in the form of chicken parts and value added products. Most of the broiler chickens are exported to Singapore. In order to penetrate the export market, broiler chicken producer have to meet the requirements of importing country such as veterinary sanitary, quality and disease status. Besides that, they should produce competitive products, quality and price.

Broiler Chicken Exports ('000 metric tons)

1996	1997	1998	1999
66.88	72.25	61.45	77.44

1. [Aliran Tunai Bagi Projek Ternakan Ayam Pendaging \(34 KB\)](#)
2. [Cash Flow For 50,000 Birds Broiler Farming \(29 KB\)](#)

1. Aliran Tunai Bagi Projek Ternakan Ayam Pendaging (34 KB)

ALIRAN KEWANGAN BAGI PROJEK AYAM DAGING

20,000 Ekor/kandang/pusingan

Kemasukan 20,000 ekor setiap 2 bulan, 2 bulan 1 pusingan

Pusingan se Tahun	5	Kandang	1 buah
Kadar Kematian	5%		
FCR	2		
Berat Akhir	2.3 kg		
Harga Jualan	5.50 / kg		
a. Kos DOC	4000.00 / Pusingan	2.00 /ekor	Kos
b. Kos Makanan Ayam	174800.00 / Pusingan	8.74 /ekor	Makanan = 1.90 se kg
c. Kos Ubatan & Veksin	2000.00 / Pusingan	0.10 /ekor	Kandang 16.00 se ekor
d. Kos Utiliti (api, air & gas)	4000.00 / Pusingan	0.20 /ekor	Peralatan 5
e. Upah & Gaji	8000.00 / Pusingan	0.40 /ekor	Jangka hayat reban 15 tahun
f. Pengangkutan	4600.00 / Pusingan	0.23 /ekor	
		Kos 12.28 /ekor hidup	
		Kos 5.34 /kg	
Jualan Tinja	1520 RM/ pusingan		

PENYATA PENDAPATAN DAN ALIRAN TUNAI

	Tahun 0	Tahun 1	Tahun2	Tahun3	Tahun4	Tahun 5	Tahun 6	Tahun 7	Tahun 8	Tahun 9	Tahun 10
ALIRAN TUNAI MASUK											
a) Jualan Ayam Daging	0	1,201,750	1,201,750	1,201,750	1,201,750	1,201,750	1,201,750	1,201,750	1,201,750	1,201,750	1,201,750
b) Jualan tinja		7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600
JUMLAH ALIRAN TUNAI MASUK	0	1,209,350	1,209,350	1,209,350	1,209,350	1,209,350	1,209,350	1,209,350	1,209,350	1,209,350	1,209,350
KOS TETAP											
B.1. PERBELANJAAN POKOK:											
a) Pembinaan Reban& peralatan	320,000										
b) Peralatan	100,000										
c) Generator	20,000										
Jumlah Kos Tetap	440,000										
PERBELANJAAN OPERASI (V1)											
a) Pembelian Anak ayam		200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
b) Makanan ayam		874,000	874,000	874,000	874,000	874,000	874,000	874,000	874,000	874,000	874,000
c) Ubat-ubatan dan veksin		10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
d) Utiliti (api dan air)		20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
e. Upah & Gaji		40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000
PERBELANJAAN OPERASI (V2)											
f. Pengangkutan		23,000	23,000	23,000	23,000	23,000	23,000	23,000	23,000	23,000	23,000
g) Susut nilai Reban, Peralatan		29,333	29,333	29,333	29,333	29,333	29,333	29,333	29,333	29,333	29,333
Jumlah Kos Operasi	0	1,196,333	1,196,333	1,196,333	1,196,333	1,196,333	1,196,333	1,196,333	1,196,333	1,196,333	1,196,333
JUMLAH KOS	440,000	1,196,333	1,196,333	1,196,333	1,196,333	1,196,333	1,196,333	1,196,333	1,196,333	1,196,333	1,196,333
PENDAPATAN BERSIH		13,017	13,017	13,017	13,017	13,017	13,017	13,017	13,017	13,017	13,017
Masuk Semula susut nilai		29,333	29,333	29,333	29,333	29,333	29,333	29,333	29,333	29,333	29,333
JUMLAH KOS TANPA SUSUTNILAI	440,000	1,167,000	1,167,000	1,167,000	1,167,000	1,167,000	1,167,000	1,167,000	1,167,000	1,167,000	1,167,000
C. LEBIHAN TUNAI/ DEFISIT	(440,000)	42,350	42,350	42,350	42,350	42,350	42,350	42,350	42,350	42,350	42,350
D. LEBIHAN TUNAI TERKUMPUL	(440,000)	(397,650)	(355,300)	(312,950)	(270,600)	(228,250)	(185,900)	(143,550)	(101,200)	(58,850)	(16,500)
E. ANALISA KEWANGAN:			4%	10%							
1. NILAI SEMASA (4.00%,8 Tahun)	NPV		(92,792)	(163,434)		Pendapatan sebulan		1,085			
2. KADAR PULANGAN DALAM (8 Tahun)	IRR		-1%	-1%							
3. NISBAH HASIL/KOS (df = 4%)	BCR		0.99	0.98							
4. TEMPOH PULANG MODAL	PBP			tahun							

2. Cash Flow For 50,000 Birds Broiler Farming (29 KB)

Cash Flow for 50,000 Birds Broiler Farming

Cycles per Year	6		
Mortality Rate	5%	per annum	
Feed Conversion ratio (FCR)	2		
Finishing Weight of Bird	2.3	kg	
Selling Price	5.50	/ kg	
DOC Price	2.00	/ chick	Cost of
Feed Cost	8.74	/ bird / Cycle	Feed
Labour Cost	0.14	/ bird / Cycle	1.9 / kg
Bird Catching Cost	0.028	/ bird	
Drugs & Medicines	0.15	/ bird	
Utilities Cost	0.03	/ bird	
Transportation	0.19	/ bird	
Revenue from Waste	4000	/ Cycle	
Total number of Birds per Cycle	50,000		

CASH FLOW

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue						
a) Live Bird Sales	0	3,605,250	3,605,250	3,605,250	3,605,250	3,605,250
b) Sale of Waste	0	24,000	24,000	24,000	24,000	24,000
Total Revenue	0	3,629,250	3,629,250	3,629,250	3,629,250	3,629,250
Investment						
B.1. Capital Cost						
a) Broiler House	400,000					
b) Equipment	30,000					
Total	430,000					
Operational Cost (V1)						
a) DOC Purchase		600,000	600,000	600,000	600,000	600,000
b) Bird Feeds		2,622,000	2,622,000	2,622,000	2,622,000	2,622,000
c) Medication & Vaccines		45,000	45,000	45,000	45,000	45,000
d) Transport Rentals		57,000	57,000	57,000	57,000	57,000
Operational Cost (V2)						
e) Wages		42,000	42,000	42,000	42,000	42,000
f) Utilities (water & electricity)		7,500	7,500	7,500	7,500	7,500
g) Contingencies (@5%)		21,500	21,500	21,500	21,500	21,500
e) Bird Catching Cost		8,400	8,400	8,400	8,400	8,400
Total		3,403,400	3,403,400	3,403,400	3,403,400	3,403,400
TOTAL COST	430,000	3,403,400	3,403,400	3,403,400	3,403,400	3,403,400
C. Surplus / Deficit	(430,000)	225,850	225,850	225,850	225,850	225,850
Cummulative Surplus / Deficit	(430,000)	(204,150)	21,700	247,550	473,400	699,250
D. FINANCING						
D.2. Loan (80%) RM344,000	344,000	0	0	0	0	0
E. Balance at Year End:	(86,000)	225,850	225,850	225,850	225,850	225,850
Loan Repayment		77,272	77,272	77,272	77,272	77,272
Total Cost Including Loan Repayment	0	3,480,672	3,480,672	3,480,672	3,480,672	3,480,672
G. Surplus / Deficit	(86,000)	148,578	148,578	148,578	148,578	148,578
Cummulative Surplus / Deficit	(86,000)	62,578	211,157	359,735	508,313	656,891

I. FINANCIAL EVALUATION

	<u>W/O Loan</u>	<u>W / Loan</u>
NPV	284,421	358,311
IRR	44%	172%
BCR	1.02	1.04
Pay-Back Period	4.4	4.3