A GUIDE TO VALUING OSTRICH

VALUING OSTRICH BREEDERS AND SLAUGHTER BIRDS

Introduction

A reliable and fair method to value ostriches is required when buying and selling and also at times of accidental death or forced culling due to disease outbreaks, when compensation by government sometimes becomes payable under special programs.

Historically, livestock were sold through local farmers markets at auction. This set the values for governments to follow when establishing compensation payments. Today the majority of production livestock are sold on contract or companies run fully vertically integrated operations; operations that own the breeding stock and market the end product, controlling all the production steps along the way.

Valuations today are based on fair market value, with market value based on historical records of sales of slaughter animals or a formula for breeder animals relating to profit potential of offspring based on annual production and estimated number of years of production.

There are no auction markets for Ostrich in most countries and sale value varies according to market development in many countries. The only way to provide a fair value is when the producer can prove the value through the use of their records. Records that include bird production statistics, revenue achieved and costs of production are therefore essential. The onus will be on the producer selling their stock, or in the unfortunate position of having a compulsory cull, to prove the value. When no records are available the only value is “WPWP” (What People are Willing to Pay).

This document will provide guidelines on how to use production records to value birds. Any actual figures referenced are for illustration purposes only.

Establishing Production Value

The first step is to develop a basis for calculating Production Value. Production value is based on Revenue less Costs of Production, and when relating that to output per breeder, is also related to the number of offspring produced per annum and years of productive breeding.

Ostrich production continues to achieve extremely variable results, with few achieving greater than 50% conversion of eggs to slaughter birds/future breeding stock. Operating at this low level makes establishing values challenging unless the producer has established historical records over a number of years.

A further current weakness of Ostrich production is the hugely variable slaughter age. Chicken producers have reduced steadily their days to slaughter, with the best now achieving 32 days. Ostrich have the capability to reach current average slaughter weight or better in less than 182 days (26 weeks) and to produce a skin that is totally acceptable to the market. Currently slaughter age can vary from under 200 days (28 week in excess of 420 days (60 weeks) and anything in between. Using cost of production as a method of valuing slaughter birds in the compulsory cull situation is not a sensible method, as the older the bird the greater the costs of production and the lower the profit potential.

Establishing a value for slaughter birds is required not only to directly compensate for any slaughter birds, but also to establish breeder bird production potential. Breeder value is based on the production value of their progeny.

All values discussed are US Dollar unless otherwise stated.

Production Value of a Slaughter Bird

To establish the production value of a Slaughter Bird it is necessary to know the gross revenue and the costs of production to establish the gross margin per bird. The following is a worked example of the calculations and illustrates the importance of adequate records.

Table 1 is the average revenue based on yield class. Revenue is based on producer yield payment using base wholesale deboned leg price of US$7.80/kg or Euros$6.50/kg and an average green skin price of US$75 to the producer[1]. A processing charge of US$60/bird[2] has been deducted.

Yield Class	40 Weeks	45 Weeks	50 Weeks	60 Weeks
Class 1 - +45kgs	$345	$345	$345	$345
Class 2 - 40kgs – 45kgs	$305	$305	$305	$305
Class 3 - 35kgs – 40kgs	$270	$270	$270	$270
Class 4 - 30kgs – 35kgs	$240	$240	$240	$240
Class 5 - 25kgs – 30kgs	$205	$205	$205	$205

Table 1 - Revenue per Bird

Weights are Boneless Meat as defined in World Ostrich Association Meat Yield Classification Appendix 1[3]

Production costs are based on average feed costs[4] at the various weeks to slaughter. Chick cost should include capital cost of breeder birds if raised on the farm. Other costs must include veterinary, labour, cost of capital and other farm costs that will vary from farm to farm and region to region. Efficiencies achieved through economies of scale also impact on these costs.

	40 Weeks	45 Weeks	50 Weeks	60 Weeks
Feed	$145	$170	$195	$245
Chick	$30	$30	$30	$30
Other	$35	$40	$45	$50
TOTAL	**$210**	**$240**	**$270**	**$325**

Table 2 - Costs per Bird

The important factor to note is that revenue is influenced by yield and costs are influenced by age of slaughter and this has a significant impact on the gross margin.

Birds that have been retained as replacement breeders will need good production records to prove their productive value. Failing that, good records on costs of production to the age of sale or culling will be required to achieve greater than slaughter value.

[1] Skin Prices are based on producer price sold green and are determined by quality, volume and destination. Factors determining quality include size, texture, quill size, scaring, holes, removal method, storage and general condition of skin. US$75 per skin is a fair average price when no track record is available.

[2] Wholesale price at time of writing for non-graded meat, see Appendix 2, Page 9. Meat price is determined by volume, demand, quality, value adding, e.g. portioned steaks, processing, ready meals, muscle size etc

[3] Appendix 1 Page 6

[4] Feed Costs are based on average cost of rations capable of producing high yielding meat birds in the time scale specified with acceptable skin when accompanied by high standards of management.

Valuing Breeder Birds

To develop a strong industry requires a solid breeder base. To establish a value for Breeder Birds it is necessary to know:

- Age of Bird
- Remaining Production Years
- Production History
- Gross Revenue of Progeny
- Gross Margin %
- Slaughter Value
- Genetic Production History

There are many Ostrich breeder birds today that have no meaningful records, including age. In addition there are a number of negative management factors that can result in production of poor quality eggs and in extreme cases, lack of fertility and inability to breed or lay eggs. There is no basis to assess the potential productivity when no records are available, the price paid can only be determined by the "WPWP" principle. Buyers beware of taking unsupported production information as fact.

The condition of the chick at hatch determines the ability of the chick to survive and when combined with sound management systems will be ready for slaughter at a younger age.

A bird in poor condition, not achieving good size or with a poor management history will not achieve their full production potential and therefore are not recommended to become breeders. These birds will only have a cull slaughter value[5]. It must be remembered that when there is no production history, there is no proof that the bird will be capable of breeding, so in this situation bird condition and knowledge of production method is essential information for the purchaser.

A suggested formula to value breeders when progeny values and production records are available to substantiate fully is:

"Total progeny revenue x gross margin percentage x 2 + Cull Slaughter Value"

The 2 represents 2 years of estimated gross margin.

It is well documented that Ostrich breeders can remain productive for in excess of 10 seasons. Current studies show peak production between the ages of 7 to 11 years, with good levels of production continuing after 12 years of age. This research may be distorted when comparing the production in different age groups and working to averages, as it does not take into allowance poor performing birds at younger ages.

Progressive producers will be culling hard to improve the genetic base of their herd; this will mean a shorter time in the breeder herd. When calculating the value of a breeder, it is necessary to take a fair estimate of the breeding life and likely earnings that breeder bird will generate. Records are required to support productive life.

[5] Cull Slaughter Value - This is the value that any bird that does not qualify for breeder valuation and is past Prime Slaughter Age would receive at slaughter. This value will vary depending on the local market conditions and should be the value to the producer after slaughter costs.

Based on the examples in Table 1 and Table 2, Table 3 demonstrates the influence of increased meat yield and younger slaughter on profitability.

Slaughter Birds Gross Margins			
Yield Class	**40 weeks**	**45 weeks**	**50 Weeks**
Revenue			
Class 1	$345	$345	$345
Class 2	$305	$305	$305
Class 3	$270	$270	$270
Class 4	$240	$240	$240
Class 5	$205	$205	$205
Costs of Production			
All Yield Classes	$210	$240	$270
Gross Profit			
Class 1	$135	$105	$75
Class 2	$95	$65	$35
Class 3	$60	$30	$0
Class 4	$30	$0	-$30
Class 5	-$6	-$35	-$65
Gross Margin/per Slaughter Bird			
Class 1	39%	31%	22%
Class 2	31%	21%	11%
Class 3	22%	11%	0%
Class 4	12%	0%	-12%
Class 5	-3%	-17%	-32%

Table 3 - Comparative Gross Margins

Table 4 is a worked example to demonstrate the calculation method based on Yield Class 3 progeny production as detailed in Table 3, using 40 weeks slaughter age multiplied by the number of slaughter birds produced per breeder. Note the increase in value when the increased numbers of progeny are successfully produced.

Slaughter Birds per Breeder			
	20	**40**	**60**
Gross Revenue			
Class 3	$5,400	$10,800	$16,200
Gross Margin			
Class3	22%	22%	22%
Productive Value of Breeders at start of Lay			
Class 3	$2,385	$4,771	$7,156

Table 4 - Worked Examples – Yield Class 3 Progeny

Table 5 illustrates the enhanced earning from a breeder bird when Class 1 birds are produced. The ability of breeders to produce Class 1 birds is a key factor to success and clearly increases the value of the breeders.

Slaughter Birds per Breeder			
	20	**40**	**60**
Gross Revenue			
Class 1	$6,900	$13,800	$20,700
Gross Margin			
Class 1	39%	39%	39%
Productive Value of Breeders at start of Lay			
Class 1	$5,385	$10,771	$16,156

Table 4 - Worked Example – Yield Class 1 Progeny

As the industry matures with a data base of certain genetic lines being strong in specific traits such as:

- Size and Conformation
- Feed Conversion Efficiency
- Muscle Size
- Feather Quality
- Skin follicle size
- Egg Production
- Fertility

These and other aspects are all important and have a value to the breeder depending on the specific traits being selected.

Good genetic performance can only be optimised when supported by adequate nutrition combined with high standards of management.

Summary

This document provides a basis to value birds when purchasing birds for commercial production, for insurance purposes and estimating compensation in the event of compulsory cull. This document illustrates the critical role of records to establish market values and fair rates of valuation.

Ostriches today are extremely variable in their production potential as a result of the poor market conditions and variability of management systems utilised during the transition process from breeder markets to commercial production. High levels of production performance cannot be assumed, they must be substantiated with full records.

Appendix 1

World Ostrich Association
Meat Yield Classifications, Version 1.0
March, 2003

The Meat Yield Classification can be determined by the total yield of Deboned Meat harvested from a bird.

DEFINED: Deboned Meat Weight is the total weight of the Drum Muscle assembly without the leg bone, the Thigh muscle assembly without the Thigh Bone and the Tenderloin muscle.

DEBONED MEAT WEIGHT STANDARD: Silver/Blue skin left on the meat, Major Tendon ends removed. Not included in the weight are: Rib Cage meat, Neck meat, Organ meat or Fat.

YIELD CLASS & Suggested Payment System
(Deboned Meat per carcass for Prime and Choice Grades)

CLASS	KILOGRAMS	POUNDS	SUGGESTED Payment
Class 1	45+kg	99+lbs.	100% Full Price
Class 2	40 to 45 kg	88 to 99 lbs.	Less than Class 1 price
Class 3	35 to 40 kg	77 to 88 lbs.	Less than Class 2 price
Class 4	30 to 35 kg	66 to 77 lbs.	Less than Class 3 price
Class 5	25 to 30 kg	55 to 66 lbs.	Less than Class 4 price

Note: The Yield Class price is directly connected to processing costs per bird. A lower yielding bird warrants a lower price per kg/pound of yield to keep all meat costs the same no matter what Yield Class the meat came from.

Grade, Yield & Payment Overview:

The Grades PRIME and CHOICE are the only grades recommended to be connected with the Deboned Meat Yield Classification & Suggested Payment System in an effort to encourage the farmer to raise quality birds with lots of boneless meat.

This type of bird will almost always mean a bird that has been fed a well-balanced diet that will result in high quality meat with consistent taste and colour. It is recommended that the Yield Classes be a different price per pound/kilo for each different class with Class 1 being the highest paid price per pound/kilo.

It is not recommended to implement the Deboned Meat Yield Classification & Suggested Payment System with the SELECT & UTILITY Grade but rather pay the farmer a single price. The price for UTILITY grade Ostrich should be low enough to discourage this type of Ostrich production. A Non-Food Grade carcass should be of no payment to the farmer and may carry a "charge back" for the slaughtering costs involved.

The Grades of Prime, Choice, Select, and Utility are meat grades and can be implemented with BOTH farmers and consumers alike. The Yield Class & Payment System is a processor/farmer program to encourage the farmer to raise a high quality product that is profitable for the processor to process and market.

Appendix 2

WOA CARCASS GRADING SYSTEM

January 4th, 2003

Version 1.0

OSTRICH CARCASS/MEAT GRADES
Prime
Choice
Select
Utility
Non-Food

Prime Grade Defined	
Item	**Status or Condition**
Bird Age	Less than 16 months of age
Fat Pan Color	White Fat Pan color only
Muscle Color	Even red muscle color throughout
Heart Condition	Heart of normal size, color & texture with no damage
Liver Condition	Mid-brown color with no abscess/ulcerations
Disease Condition	No disease symptoms or evidence
Other Condition	No Oedema or "jell" substance on heart, thigh or sternum

Note: A Prime Grade carcass will yield the highest amount of primary meat cuts with a consistent degree of tenderness throughout all the primary meat muscles.

Choice Grade Defined	
Item	**Status or Condition**
Bird Age	16 to 24 months of age
Fat Pan Color	White Fat Pan color only
Muscle Color	Even red muscle color throughout
Heart Condition	Heart of normal size, color & texture with no damage
Liver Condition	Mid-brown color with no abscess/ulcerations
Disease Condition	No disease symptoms or evidence
Other Condition	No Oedema or "jell" substance on heart, thigh or sternum

Note: A Choice Grade Ostrich carcass will yield a few primary meat cuts, if carefully selected, with a reasonable degree of tenderness. The majority of the Choice carcass will be secondary meat cuts and ground meat.

Select Grade Defined	
Item	**Status or Condition**
Bird Age	25 months of age and older
Fat Pan Color	White Fat Pan color only
Muscle Color	Even red muscle color throughout
Heart Condition	Heart of normal size, color & texture with no damage
Liver Condition	Mid-brown color with no abscess/ulcerations
Disease Condition	No disease symptoms or evidence
Other Condition	No Oedema or "jell" substance on heart, thigh or sternum

Note: A Select Grade carcass should ONLY be used for value-added products and ground meat products.

Utility Grade Defined	
Item	**Status or Condition**
Bird Age	Any age of bird
Fat Pan Color	Yellow Fat Pan color
Muscle Color	Multi-coloring of muscles (pink to dark red)
	White color areas in some muscles
Heart Condition	Small, damaged or spongy texture heart
Liver Condition	Yellow, Green or Black Color
	Liver abscesses or ulcerations
Disease Condition	No disease symptoms or evidence
Other Condition	Oedema or "jell" substance on heart, thigh or sternum

Note: A Utility Grade carcass should ONLY be used for value-added products and NOT for primary cuts, secondary cuts, or ground meat products.

Non-Food Grade Defined	
Item	**Status or Condition**
Bird Age	Any age of bird
Muscle Color	Muscles with abscesses or channels in meat
	Muscles with light or dark spots
Liver Condition	Spotty or infected livers
Disease Condition	Any disease symptoms or evidence

A Non-Food Grade Ostrich carcass will exhibit one or more of the above undesirable traits

Note: A Non-Food Grade carcass must not be used for human consumption.