PLANNING FOR PROFIT

BRITISH COLUMBIA **Ministry of Agriculture, Food, & Fisheries**

FREE RANGE MEAT CHICKENS AND ALFALFA/GRASS HAY
SMALL SCALE OPERATION - 5 ACRES WINTER 2002

This information is provided as a tool for projecting costs and returns for B.C. farm enterprises and as a general guide for planning individual farms. The sample budget should be used as a guide only and should not be used for business analysis without adjustments to reflect individual situations. Each farm should develop their own budget to reflect their production goals, costs and market prices.

Information regarding financial planning and other enterprise budgets may be downloaded from the internet at B.C. Ministry of Agriculture, Food and Fisheries. Web (http://www.agf.gov.bc.ca/busmgmt/).

Key Success Factors

- Sound knowledge and skills in animal husbandry and forage production to attain optimum quality and yields; ensure low mortality and morbidity in chickens; sufficient drying time and adequate fertility for hay production.
- Good site selection and preparation -
- Identify and research your markets. Pre-sell as much as possible to reduce storage volumes and establish profit margins.
- Reduce direct and indirect expenses as much as possible. Purchase bulk feeds whenever possible.

Market Factors

- Small scale production of hay and meat chickens is generally destined for the local market. Sales are completed from the farmgate. The grower can adjust prices according to local demand and supply. Production adjustments such as final dressed carcass weights and bale weights may also be made according to customer demand.
- Providing value added products such as sausage may enhace your competitive advantage.

Risk Factors and Strategies

Production Risks - Reduced morbidity and mortality along with a balanced feeding program and optimum feed efficiencies are vital to attaining production targets for meat chickens. Sound fertility management and appropriate timing of haying operations are essential elements in hay production. Climate, topography and soil conditions will affect crop and variety options. Ensure you make selections that are suited to your area.

Processing and feed prices are the largest direct expense for meat chicken production. These costs can vary according to your location.

Inexperience and lack of diligence can result in a set back or general reduction in production. Adverse weather, such as unexpected or heavy rains during the haying season can reduce the quality of the hay crop.

Handling Risks - Ensure crops are properly harvested and birds are properly shipped. Adequate storage for hay and meat is essential , particularly if products are sold off over a period of time following harvest or processing.

Price Risks -This will depend upon your location and method of marketing. The price for small scale poultry products is generally higher than supermarket prices. Producers have a certain degree of control over pricing but levels must still be within a certain range of customer expectations. Prices for hay can vary according to local supply. Prices for hay can vary according to local supply. Annual weather conditions generally impact hay prices the most. Winter sales of stored hay may provide higher returns, depending on local supplies.

Competition from other direct marketers of poultry and hay is a constant factor. Adjustments in your production or marketing plans may be required. Providing a consistent and high quality product and ensuring your customer needs are met are vital elements in offsetting adverse effects of a competitive market place.

Market Risks - In a direct marketing system, supply and demand of local product are key issues. Ensure that the commodities grown have a high demand and be aware of new or existing producers that may impact the market.

Tailor your production decisions and prices according to what your market will bear. Adjustments in final final carcass weights or bale weights may be required to satisfy customer demand. Pre-selling will help eliminate unexpected market changes.

SAMPLE ENTERPRISE BUDGET AND WORKSHEET
5 ACRES OF ALFALFA-GRASS HAY AND 2 BATCHES OF FREE RANGE MEAT CHICKENS

The sample enterprise budget provided should be viewed as a first approximation only. Use the colum "your farm" to add, delete and adjust items to reflect your specific production situatio

Projected Income

Product	Amount	Yield	Unit	Price	Income	Your Farm
Alfalfa-grass hay	5 acres	180	bales/acre	$3.50	$3,150.00	
Meat Chickens	600 birds	6	lbs/bird	$2.50	$9,000.00	
Total					$12,150.00	

Projected Direct Expenses

Item	Quantity	Unit	Price	Expense	Your Farm
Day-old chicks	645	chicks	$1.00	$645.00	
Feed					
.starter ration(20%)	451.5	kg	$0.49	$222.36	
.grower ration(18%)	5400	kg	$0.33	$1,776.60	
Process/Packaging	600	birds	$3.00	$1,800.00	
Bedding				$60.00	
Fertilizer					
.34-0-0	275	kg	$0.42	$115.50	
.11-52-0	250	kg	$0.53	$132.50	
.0-0-60	100	kg	$0.35	$35.00	
Custom cut/bale	900	bales	$1.50	$1,350.00	
Tractor Fuel	110	litres	$0.50	$55.00	
Tractor Oil & lube				$8.25	
Repair&Maintenance*				$941.58	
Electricity				$60.00	
Marketing					
.advertising				$180.00	
.hauling	600	birds	$0.10	$60.00	
Irrigation	5	acres	$55.00	$275.00	
TOTAL				$7,716.79	
Income less Direct Expenses				$4,433.21	

*****inputs are for the total farm/production area and are not crop specific

Projected Indirect Expenses		**Your Farm**
Depreciation	…….	_____
Interest	…….	_____
Insurance	…….	_____
Administration	…….	_____
Legal/accounting	…….	_____
Other	…….	_____
Total		

Indirect expenses do not vary with the level of output and are typically associated with inputs used in more than one enterprise and must be allocated appropriately (prorated) between uses.

Projected Net Income		**Your Farm**
Projected Income	……	_____
minus Projected Direct AND Indirect Expenses	……	_____
	Projected Net Income	_____

Individual Production Budgets and Worksheets

The following income and direct expense information does not account for general farm inputs that are applied to the total farm area (ie.repair&maintenance.)

1. Meat Chickens

Income	**Amount**	**Yield**	**Unit**	**Price**	**Income**	**Your Farm**
Total Income	600 birds	6	lbs/bird	$2.50	$9,000.00	_____

Direct Expenses	**Quantity**	**Unit**	**Price**	**Expense**	**Your Farm**
Day-old chicks	640	chicks	$1.00	$640.00	_____
Feed					
.starter ration(20%)	451.5	kg	$0.49	$222.36	_____
.grower ration(18%)	5400	kg	$0.33	$1,776.60	_____
Process/Packaging	600	birds	$3.00	$1,800.00	_____
Bedding				$60.00	
Tractor Fuel	80	litres	$0.50	$40.00	_____
Tractor Oil & lube				$6.00	_____
Electricty				$60.00	
Marketing					_____
.advertising	600	birds	$0.10	$180.00	_____
.hauling	600	birds	$0.10	$60.00	_____
Total Direct Expenses				$4,844.96	_____
Income less Direct Expenses				$4,155.04	_____

2. Alfalfa-grass hay (5 acres)

Income	Amount	Yield	Unit	Price	Income	Your Farm
Total Income	5 acres	180	bales/acre	$3.50	$3,150.00	

Direct Expenses	Quantity	Unit	Price	Expense	Your Farm
Fertilizer					
.34-0-0	275	kg	$0.42	$115.50	
.11-52-0	250	kg	$0.53	$132.50	
.0-0-60	100	kg	0.35	35	
Custom cut/bale	900	bales	1.5	1350	
Tractor Fuel	30	litres	$0.50	$15.00	
Tractor Oil & lube				$2.25	
Marketing					
.advertising	6	ads	$20.00	$120.00	
Irrigation	5	acres	$55.00	$275.00	
Total Direct Expenses				**2045.25**	
Income less Direct Expenses				$1,104.75	

Sensitivity Analyses of Total Production Income Margin

Profitability is strongly influenced by market prices and yield. The tables below illustrate the changes to income margin *(income less direct expenses)* as prices and yield vary.

Price vs. Income less Direct Expenses

	80% of Target Price	90% of Target Price	Target Price	110% of Target Price	120% of Target Price
Income less Direct Expenses	$2,003	$3,218	$4,433	$5,648	$6,863

Yield vs. Income less Direct Expenses

	75% of Target Yield	85% of Target Yield	Target Yield	115% of Target Yield	125% of Target Yield
Income less Direct Expenses	$2,642	$3,359	$4,433	$5,508	$6,224

Sensitivity Analyses of Individual Farm Product Income Margins

1. Meat Chickens (2 batches of 300 birds/batch)

Price vs. Income less Direct Expenses

	80% of Target Price	90% of Target Price	Target Price	110% of Target Price	120% of Target Price
Price/lb	$2.00	$2.25	$2.50	$2.75	$3.00
Income less Direct Expenses -600 birds	$2,355.04	$3,255.04	$4,155.04	$5,055.04	$5,955.04
Income less Direct Expenses -per bird	$3.93	$5.43	$6.93	$8.43	$9.93

Yield vs. Income less Direct Expenses

	75% of Target Yield	85% of Target Yield	Target Yield	115% of Target Yield	125% of Target Yield
Yield(lbs)	4.50	5.10	6.00	6.90	7.50
Income less Direct Expenses -600 birds	$2,814	$3,351	$4,155	$4,960	$5,496
Income less Direct Expenses -per bird	$4.69	$5.58	$6.93	$8.27	$9.16

2. Alfalfa-grass Hay (5 acres)

Price vs. Income less Direct Expenses

	80% of Target Price	90% of Target Price	Target Price	110% of Target Price	120% of Target Price
Price ($/bale)	$2.80	$3.15	$3.50	$3.85	$4.20
Income less Direct Expenses -5 acres	$475	$790	$1,105	$1,420	$1,735
Income less Direct Expenses -1acre	$95	$158	$221	$284	$347

Yield vs. Income less Direct Expenses

	75% of Target Yield	85% of Target Yield	Target Yield	115% of Target Yield	125% of Target Yield
Yield (bales)	135	153	180.00	207	225
Income less Direct Expenses -5 acres	$655	$835	$1,105	$1,780	$2,095
Income less Direct Expenses -1acre	$131	$167	$221	$356	$419

Cash Flow Timing

The table below indicates the monthly flow of income and indirect expenses. It is assumed that farm products are sold from the farm with limited storage (ie.less than 7 days). A complete projected cash flow should include indirect expenses, capital sales and purchases, loans and personal expenses.

	J	F	M	A	M	J	J	A	S	O	N	D
% Income	0	0	0	0	0	50	10	0	40	0	0	0
% Direct Expenses	0	0	0	25	0	25	30	0	20	0	0	0

Investment Capital Replacement Costs

Item	Amount
Buildings,fencing	$3,500
Tractor	$5,000
Implements	
….. Harrow	$1,000
….. Fertilizer spreader	$2,500
Wagon	$3,000
Vehicles(truck/trailer)	$8,000
Small Tools & Equipment	$1,000
Freezer	$500
Forage planting costs	$886
Irrigation System	$6,000
Total	**$31,386**

Hours Labour Required

Task	Chickens	Hay	Overhead	Total
Feeding	140			140
Bedding	8			8
Collect birds for processing	12			12
Ship to/from processor	4			4
Fertilizer application		1.25		1.25
Harrowing		1.25		1.25
Bale collect/haul		15		15
Custom swath/turn/bale		30		30
Marketing/Sales			12	12
Irrigating		56		56
General Maintenance			40	40
Total Labour	164	103.5	52	319.5

References:

- BCMAFF Forage Production Guide for commercial growers.
- BCMAFF - Planning for Profit Budgets.
- Oregon State University Extension Service: Enterprise Budgets (http://www. orst.edu/extension/) .

Contributors:

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Assumptions:

The following assumptions were made in calculating the sample budget:

1. Income & Expenses:

- Projected income and expenses are based on 2 batches of 300 meat chickens(broilers) and 5 acres of alfalfa-grass hay. Total farm size is 10 acres.

2. Meat Chickens (broilers)

- 600 meat chickens raised per season in two batches of 300 . Assuming a final mortality rate of 7%, need to purchase 645 chicks per season.Birds are raised for 10wks in a free range system from April-June and July-Sept. Birds have access to a 0.7 acre pasture area during the day (weather permitting) and are housed in an 800 to 900 square foot barn at night.
- All processing and packaging is done by a custom processor/packer at a cost of $3 - 00/bird (includes all packaging) -
- Feed costs are calculated as 0 - 7kg/bird of 20%starter at a cost of $9 - 85/20kg bag ($0 - 49/kg) and 9kg/bird of 18% grower at a cost of $329/tonne (minimum 3tonne bulk order;delivered).

20% starter:	0.7kg/bird x 645 birds x $9.85/20kg;	$222.36
18% grower:	9kg/bird x 600 birds x $329/tonne (3tonne min. bulk delivery);	$1,776.60
total:		$1,998.96

3. Alfalfa-grass Hay

- Established planting of alfalfa-grass hay with an annual average production of 180 x 50lb bales (4 - 5tons) per acre in three cuts per season (ie.early June, late July, early September).
- Fertilizing and harrowing are done by the grower. Haying is done by a custom contractor for a cost of $1 .50/bale.
- Hay is hauled off the field by the grower and sold over the season to local customers.
- Fertilizer applied includes: 55kg/acre of 34-0-0, 40kg/acre of 11-52-0, 20kg/acre of 0-0-60 to supply 23kg/acre N, 21kg/acre P2O5, and 12kg/acre K2O.
- Costs of establishing forage stand are calculated as follows: 6kgseed/acre x $65/25kg x 5acres = $78 - 00.

seed:	6 kg/acre x $65/25kg x 5 acres	$78.00
custom seed/field prep:	1.75hr/acre x $60/acre x 5 acres	$525.00
fertilizer		$283.00
total:		$886.00

4. Marketing Information:

a. Costs

- Costs for advertising and sales and are assumed at $0 - 10/bird plus 6wks of newspaper ads x $20/wk = $180/yr.
- Cost for hauling to and from the processor are assumed at $0 - 10/bird for a total cost of $60/yr.

b.Returns

- Returns for meat chickens at 2 - 50/lb for 6lb dressed carcass wt = $15/bird .
- Returns for hay assumed at $3 - 50/bale for 180 (50lb) bales x 5 acres = $630/acre ($3150 total).

5 .Labour requirements:

Feeding:	2 x 1hr/day x 7days/wk x 10wks;	140 hrs
Bedding:	2 x (1hr bedding in + 3hrs bedding out);	8 hrs
Bird collection:	50birds/hr; 600 birds;	12 hrs
Shipping to/from processor:	2 x 2hrs	4 hrs
Irrigating alfalfa-grass:	1hr/day x 7days/wk x 8wks;	56 hrs
Custom swath/turn/bale:	(0.75hr +0.75hr+0.5hr)/acre x 5acres x 3cuts	30 hrs
Bale collection/haul:	3cuts x 4people x 1.25hr/5acres;	15 hrs
Marketing/sales:	10hrs for chickens (1min/bird) and 2hrs for hay.	12 hrs
Total:		277 hrs

6. Equipment/Capital Costs:

- Tractor Fuel Costs are calculated as follows: no - of tractor hours x 8L/hr consumption x $0 - 50/L price.

No. of tractor hours assumed are calculated as follows:

fertilizer application:	.25hrs/acre x 5 acres	1.25 hrs
harrowing:	.25hrs/acre x 5 acres	1.25 hrs
hauling hay from field	.25hrs/acre x 5 acres	1.25 hrs
bedding/feed chickens:		10 hrs
total:		13.75 hrs

- Oil & lube costs are assumed at 15% of fuel costs.
- Repair and Maintenance costs are calculated at 3% of investment capital replacement costs.