PLEASE SEE PAGE 2 FOR ADDITIONAL REQUIREMENTS FOR COMPLETING THIS BOOKLET

University of Idaho Extension

BUTTE COUNTY
4-H MARKET
LIVESTOCK
SUPPLEMENT

Age level (check one)
___ Junior (8-11)

___ Intermediate (12-14)

___ Senior (15-19)

Years in livestock project____
Year_____

This packet contains the following:

- **Project Requirements #91941**
- **Beginning Planning and Record Sheet and Growth Chart**
- **Swine #91944**
- **Junior (91946), or Intermediate (#91947), or Senior insert (#91948), depending on age level)**

You must also complete the 4-H Animal Project Record Book #91940 and the 4-H Involvement Report #91910

Project Objectives

1. Learn and apply recommended principles of animal science.
2. Demonstrate knowledge of sound breeding, feeding, and management practices
3. Develop integrity, sportsmanship, decision making skills, and public speaking skills
4. Practice citizenship and leadership
5 explore career, job, and leisure opportunities.

Project Requirements

General Requirements (check as completed)
Individually identify each animal with ear tag and tattoo or notching
Weigh and provide primary care of market animal during a uniform county feeding period.

Beef about 150 days
Sheep about 60 days
Swine about 120 days
Goats about 60 Days
Give demonstration or illustrated talk on something leaned in this project Provide positive ownership of animal (check those items that apply)
Idaho brand inspection
Registration certificate (purebred animals)
Bill of sale
Species specific health requirements (Brucellosis, scrapes, etc.)

Exhibit:

All required record completed and submitted to County Extension Office
Exhibit project animals) at a community, county or other livestock show
Display performance data on exhibit or stall card
Participate in Fitting and Showing with market or breeding animal

County Requirements

Butte County livestock supplement (91960) includes Junior (91946), Intermediate (91947), and Senior (91943), as well as species specific Beginning Planning and Record Growth Charts. :
Beef (91942), Sheep (91943), Swine (91944) or Goat (91945)

Project Materials Required

(Members need these masters at the start of the project)
___ Market Project Only:
___ Record Book (91940)

Record Book Requirement Checklist

(Checked at conclusions of project)
__ Attend a majority of project meetings
__ All required Growth Charts and Breeding/Production Records (see reference numbers under Project Materials Required)
__ Attach or include a copy of 4-H involvement Report (91910) per county guidelines
__ Optional: 1 to 3 pages of projects pictures with written captions
__ Species specific Beginning Planning & Record Sheet

Junior

__ Junior Planning and Evaluation (91946)
__ A written project experience

Intermediate

__ Intermediate Planning and Evaluation (91947)
__ A written project experience

Senior

__ Senior Planning and Evaluation (91948)
__ A written project experience

Additional Requirements:

- Must complete one livestock supplement book and one project record book per animal specie. All pages must be handwritten.
- - Illegible entries and lack of neatness will receive minimum points.
- _ Booklet may be burst/cut apart and put into protector sheets. Use only the sheets pertinent to your specie that you are reporting but keep the others pages in your book and mark them “non-applicable” Penalty given for failure to include all pages in numbered order
- - Supplemental documentation can be included and is encouraged but bonus points will not be given for doing so.
- - A project focused experience must be written for every specie A

10% mandatory point deduction for failure to follow these instructions will be enforced.

All Market Swine complete this page

Swine Beginning Planning and Record Sheet

Youth Name:_____

Weigh-in Date:_____ Location/Premises:_____

Animal Tag Number:_____ Weight:_____ Animal Breed:_____

Animal Tag Number:_____Weight:_____ Animal Breed:_____

Estimate the amount of muscle and frame size and then find the proper finished weight for USDA #1 grade. If the beginning weight does not permit an efficient economical gain of at least 1.8lbs per day, consider setting the USDA #2 grade as your goal.

USDA Grade	Small/Medium	Medium	Large	
1	220-250	260-280	280-320	Thick Muscle
2	250-260	270-280	290-320	
3	Xx	Xx	Xx	
1	220-230	250-260	260-270	Moderate Muscle
2	230-240	260-280	280-300	
3	240-260	270-280	290-300	
1	200-220	220-240	240-260	Light Muscle
2	220-240	240-260	260-280	
3	230-240	260-280	270-280	

Estimate of Required Average Daily Gain

Est Finish Weight Beginning Weight…… Total require gain…… Days in feed period Required daily gain

Animal 1_____ - _____ = _____ divided by_____ = _____

Animal 1_____ - _____ = _____ divided by_____ = _____

Conformation/Usefulness Evaluation

Trait	Low	Fair	Average	Good	Excellent
Total Muscling	1	3	5	7	9
Total Trimness	1	3	5	7	9
Growth/Frame	1	3	5	7	9
Structure/Balance	1	3	5	7	9

Pork Industry Goals are:
Age at Market- 156-164 days
Live Weight- 260-270lbs
Hot Carcass weight- 195lbs
Back Fat- .6-.8
Loin eye 6.5-7.1 square inches
USDA grade #1
Intramuscular fat > or = 2.5-2.9%
Feed efficiency 2.4 (range 2-4)

Market Swine Growth Chart

330lbs								
300lbs								
270lbs								
240lbs								
210lbs								
180lbs								
150lbs								
120lbs								
90lbs								
60lbs								
50lbs								
Initial	+15	+30	+45	+60	+75	+90	+105	

Initial Weigh-in Date:_____ Initial Animal Weight:_____

Number of days in feed period:_____ Estimated Final Weight:_____

1. ***Mark the initial weight at the appropriate location on the left-hand side of the table.***
2. ***Mark the estimated final weight at the appropriate location for the number of days in the feeding period.***
3. ***Connect these two points with a straight line. This is your predicted rate of growth***
4. ***Record your anima's weight in the table below and the chart above each time it is weighed during the feeding period. Connect this point with the previous actual weight. Is the actual growth curve above or below your predicted growth line? Why?***

Progressive Weight Record

Weight date									
Days since last weight	xxxxxx								
Current Weight									
A.D.G since last weight	xxxxxx								
Overall A.D.G									

Tracking animal weight can tell you where your animal is compared to your goal. After each weigh day ask yourself, do you need to feed more grain or hay? Typical influences in average daily gain (A.D.G.) can be feed, water, weather and illness. Ask yourself is the A.D.G normal? What caused the problems?

Junior Planning and Evaluation Insert

Planning and Evaluating Your Project

In order to carry out a livestock project it is necessary to plan ahead for that project. The following tables ask for planning information that will help you complete your project; columns are provided to record information on up to three animals. After the project is complete, it is good to be able to compare what actually happened with what you had planned.

Animal Tags	Animal Names

	Animal #1		Animal #2		Animal #3	
	Planned	Actual	Planned	Actual	Planned	Actual
Breed of An.						
Sex of Animal						

	Animal #1			Animal #2			Animal #3		
	Planned	Actual	Difference	Planned	Actual	Difference	Planned	Actual	Difference
Ex. Purchased Weight (3 head)	600	675	+75	700	725	+25	800	750	-50
Purchased weight of animals (lbs)									
Purchase price of animals ($)									
Final Weight of Animals (lbs)									
Market Value of Animal ($)									
Amount of Feed									
Feed Cost									

Vaccines Given

In Feed Ingredients

Feed is most often the largest expense incurred in the production of livestock. On the following table list the ingredients in you ration.

Equipment that you own

Feed Equipment	Show Equipment

Project Objectives

(Examples of items to be listed include breaking animal to lead, animal injuries, or illnesses and etc.)

Date:	What was observed?

All Intermediates complete this page (#91947) Intermediate Planning and Evaluation

Intermediate Planning and Evaluation Insert

Planning and Evaluating your project

In order to carry out a livestock project it is necessary to plan ahead for that project. The following tables ask for a planning information that will help you to complete your project; columns are provided to record information on up to three animals. After the project is complete, it is good to be able to compare what actually happened with what you had planned.

Animal Tags	Animal Names

Please circle one: Market / Breeding

	Animal #1		Animal #2		Animal #3	
	Planned	Actual	Planned	Actual	Planned	Actual
Breed of An.						
Sex of Animal						

	Animal #1			Animal #2			Animal #3		
	Planned	Actual	Difference	Planned	Actual	Difference	Planned	Actual	Difference
Ex. Purchased Weight (3 head)	600	675	+75	700	725	+25	800	750	-50
Purchased weight of animals (lbs)									
Purchase price of animals ($)									
Final Weight of Animals (lbs)									
Market Value of Animal ($)									
Vaccines/implants (yes/no)									
Amount of Feed									
Feed Cost									

Vaccines

If vaccines were used, list the disease they provided protection against (use proper quality assurance injection sites)

Date:	Target Disease

Feed and Ration Plan

Feed is most often the largest expense incurred in the production of livestock. On the following table list the ingredients in the daily rations fed at the start and end of your project. In formulating rations, you also need to know the type of feed (concentrate, roughage, pasture) and pounds of each feed ingredient you have used in your ration.

Daily Feed Ration at Start of Project		
	Type	Pounds
Total Pounds fed per day		

Daily Feed Ration at End of Project		
	Type	Pounds
Total Pounds fed per day		

Inventory

All material items you used to complete your projects should be listed. Depreciable items should be worth less money at the end of the year. Any items purchased during the year should be included as expense and listed on the Ending Inventory with a depreciated value (NOT in beginning inventory).

Equipment, feed, animals(on-hand) and miscellaneous items descriptions.	Value at beginning of the year	Value at the end of the year
Total Beginning Value		
Total Ending Value		
Change in the value +/1		

Senior Planning and Evaluation Insert

Planning and Evaluating your project

In order to carry out a livestock project, it is necessary to plan ahead for that project. The following tables as for planning information that will help you complete your project; columns are provided to record information on up to three animals. After the project is completed, it is good to be able to compare what actually happened with what you had planned.

Animal Tags	Animal Names

Circle one: Market / Breeding

	Animal #1		Animal #2		Animal #3	
	Planned	Actual	Planned	Actual	Planned	Actual
Breed of Animal						
Sex of Animal						

	Animal #1			Animal #2			Animal #3		
	Planned	Actual	Difference	Planned	Actual	Difference	Planned	Actual	Difference
Ex. Purchased Weight (3 head)	600	675	+75	700	725	+25	800	750	-50
Purchased weight of animals (lbs)									
Purchase price of animals ($)									
Final Weight of Animals (lbs)									
Market Value of Animal ($)									
Vaccines/implants (yes/no)									
Amount of Feed									
Feed Cost									

Inventory

All material items you used to complete your project should be listed. Depreciable items should be worth less money at the end of the year. Any items purchased during the year should be included as an expense and listed on the Ending Inventory with a depreciated value (NOT in beginning Inventory). Give an idea of depreciation schedule.

Equipment, feed, animals(on-hand) and miscellaneous items descriptions.	Value at beginning of the year	Value at the end of the year
Total Beginning Value		
Total Ending Value		
Change in the value +/1		

Feed Ration Plan

If the beginning and ending rations are done on a computer, insert a copy of the computer rations instead of completing the tables below.

Calculating the Beginning Ration						Animals weight at beginning of feed period :_____					
Ingredient	(A) lb	(B) (C) Dry Matter		(D) (E) Protein		(F) (G) ME		(H) (I) Calcium		(J) (K) Phosphorous	
		%	lb	%	lb	%	lb	%	lb	%	lb
Ex. Alfalfa	10	90	9	23	2.07	1.23	11.07	1.8	162	.35	.032
Total:											
Anim. Req.											
Difference											

Calculate the Ending Ration						Animals weight at end of feed period :_____					
Ingredient	(A) lb	(B) (C) Dry Matter		(D) (E) Protein		(F) (G) ME		(H) (I) Calcium		(J) (K) Phosphorous	
		%	lb	%	lb	%	lb	%	lb	%	lb
Ex. Alfalfa	10	90	9	23	2.07	1.23	11.07	1.8	162	.35	.032
Total:											
Anim. Req.											
Difference											

To calculate the nutrients in each feed ingredient, follow these steps

1. ***Column C= Multiply value in Column A by value in Column B***
2. ***Column E= Multiply value in Column C by value in Column D***
3. ***Column G= Multiply value in Column C by value in Column F***
4. ***Column I= Multiply value in Column C by value in Column H***
5. ***Column K= Multiply value in Column C by value in Column J***

The nutritional requirements for your project animal are in Table 1, 2, 3, 4, 5 on pages 3-4. Difference between total nutrients provided by the ration fed and the animal's daily requirements.

lb or #= pounds; ME- metabolize able energy; Meat= mega calories.

Note: Average values for the nutrient composition of various feeds can be found on Table 5 on page 4.

Seniors only complete this page

Nutrient Requirements

For feed values see Table 6 on page 4.

Table 1. Beef minimum nutrient requirements for 3 pounds/day gain.

Weight (lb)	Dry Matter (lb/day)	Protein (lb/day)	ME (Mcal)	Calcium (lb/day)	Phosphorus (lb/day)
700	18.0	2.01	20.9	.081	.041
800	19.9	2.07	23.2	.080	.044
900	21.7	2.13	25.2	.078	.046
1000	23.6	2.19	27.5	.076	.047
1100	25.3	2.25	29.4	.066	.050
1200	27.6	2.25	32.1	.066	.053
1300	29.9	2.31	34.7	.066	.053
1400	32.2	2.35	37.4	.066	.053

Table 3. Sheep minimum nutrient requirements for .75 pound/day gain.

Weight (lb)	Dry Matter (lb/day)	Protein (lb/day)	ME (Mcal)	Calcium (lb/day)	Phosphorus (lb/day)
50 to 70	2.9	.42	3.4	.015	.007
71-100	3.3	.44	4.4	.017	.008
101 to 140	3.3	.40	4.4	.015	.008

Table 4. Swine Minimum nutrient requirements for 1.8 pounds/day gain.

Weight (lb)	Dry Matter (lb/day)	Protein (lb/day)	ME (Mcal)	Calcium (lb/day)	Phosphorus (lb/day)
22 to 44	2.1	.38	.09	.015	.007
45 to 110	4.2	.63	6.19	.025	.021
110 to 240	6.9	.090	10.19	.035	.028

Table 5. Goat Minimum nutrient requirements for .33 pound/day gain.

Weight (lb)	Dry Matter (lb/day)	Protein (lb/day)	ME (Mcal)	Calcium (lb/day)	Phosphorus (lb/day)
22	1.98	.15	1.79	.007	.005
44	2.51	.19	2.28	.009	.006
66	2.97	.23	2.70	.009	.006
88	3.41	.26	3.10	.011	.008
110	3.81	.29	3.46	0.13	.009
Maintenance*	2.51	.23	2.73	.009	.006
Late pregnancy*	3.80	.41	4.15	.013	.009
Doe: low milk production(4.4lb)*	3.80	.53	5.19	.018	.012
Doe: medium milk production (8.8lbs)*	3.80	.83	7.65	.026	.018
Doe: High milk production (13.2lb)*	3.80	1.13	10.11	.035	.025

***These requirements are based on a 132lb goat; requirements for your goat may vary.**

Nutrient Requirements Cont'd.

Table 6. List of Feeds

Feed	Dry Matter %	Protein %	ME Mcal/lb	Calcium %	Phosphorus %
Alfalfa, high quality	90	23	1.23	1.80	.35
Alfalfa, medium quality	90	19	1.01	1.50	.22
Alfalfa, low quality	90	17	.97	1.40	.24
Grass/Alfalfa	90	15	.93	.90	.29
Brome grass pasture, early	34	18	1.30	.50	.30
Fescue pasture, early	29	14.5	1.13	.51	.37
Corn silage	33	8.1	1.19	.23	.22
Alfalfa silage	30	23	1.23	1.80	.35
Barely	89	11	1.51	.06	.39
Corn	89	10	1.49	.03	.29
Wheat	89	11.3	1.55	.07	.36
Beet Pulp	92	10.1	1.30	.61	.10
Cottonseed meal	93	41	1.39	.21	1.16
Soybean meal	89	49.9	1.49	.30	.68
Whole cottonseed	92	23	1.71	.21	.64
Beef finisher*	88	12.5	1.27	.87	.41
Swine Grower ration*	90	18	1.33	.60	.50
Swine finisher ration*	90	14	1.35	.60	.50
Sheep grower ration*	90	11.6	1.22	.42	021

If your tag differs from these complete feeds, use your tag values and use 1.4 ME Mcal/lb.

Seniors only complete this page

Financial Summary

$_____ - $ _____ (+or-) $_____ = $_____

Income *Expenses* *Change in Inventory* *Gross profit or loss*

$_____- $_____= $_____

Gross Profit or loss *"Blue sky"/ support money** *Net Profit or loss*

**"Blue sky"/support money is any amount received above the actual market value of that animal.*

Production Efficiency

Average Daily Gain:

_____divided by _____ divided by_____ = _____

Total lb gained *# of animals fed* *# of days in feed period* *Average daily gain*

Feed consumed per pound of gain:

_____divided by_____ = _____

Lb feed consumed *Total lb gained* *lb of feed/ lb of gain*

Feed cost per pound:

_____divided by_____ = _____

Total feed costs *Total lb gained* *feed cost/ lb of gain*

Note: Members having more than one animal may opt to add pages and figure the production efficiency of each animal individually.

Alternate Expenses and Revenue page

Date (Mo./Day)	Animals, feeds, and miscellaneous items. Description (number, weight, etc.)	Pounds if fed	Cost of items purchased	Income from items sold
/			$	$
/			$	$
/			$	$
/			$	$
/			$	$
/			$	$
/			$	$
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/			$	$
/			$	$
/			$	$
	Total pounds of feed fed			
	Total of current year expenses		$	
	Total of current year income			$

*Carry totals to Senior Planning and Evaluation page 5.

If you need more room for your record of Expenses and Income, make a copy of this page.

Optional Feed Cost and Use Record

(For optional use only with Junior Planning and Evaluation, #91946, Feed Ingredients)

Date (Mo./Day)	Feed Item Examples: Pasture/Hay/Grain/Supplement	Quantity (pounds)	Cost/pound	Total Cost
/			$	$
/			$	$
/			$	$
/			$	$
/			$	$
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/			$	$
/			$	$
	Total quantity of feed and total cost of feed			$

Optional Feed Cost and Use Record

(For optional use only with Junior Planning and Evaluation, #91946, Feed Ingredients)

Date (Mo./Day)	Feed Item Examples: Pasture/Hay/Grain/Supplement	Quantity (pounds)	Cost/pound	Total Cost
/			$	$
/			$	$
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	Total quantity of feed and total cost of feed			$