

Prices for Crop and Livestock Cost-Return Budgets

Department of Agricultural Economics — www.agmanager.info



Kansas State University Agricultural Experiment Station and Cooperative Extension Service

Kevin C. Dhuyvetter
Agricultural Economist
Farm Management

Daniel M. O'Brien
Agricultural Economist
Crop Marketing

Troy J. Dumler
Agricultural Economist
Farm Management

Glynn Tonsor
Agricultural Economist
Livestock Marketing

The following prices and input costs have been assembled to facilitate forward planning for the farm business. Table 1 outlines the short-run (one year) planning prices used for the cost-return budgets in the Kansas Farm Management Guide series. Table 2 includes long-run average planning prices for 2011-2015 (i.e., counterpart prices to those reported in Table 1). In most cases, long-run prices are calculated as a weighted average of short-run price projections and historical cash prices.

Corn and grain sorghum feed price projections are based on the Kansas Agricultural Statistics cash price series, and include a buy/sell markup of \$0.25 per bushel. Soybean meal (48 percent protein) price projections are based on Kansas City cash price, and include a markup of \$20 per ton. Projected prices were based on relevant futures prices observed on the four Wednesdays in October 2010 used two ways, a) added to historical average (2007-2010) basis and b) used in historical (2001-2010) regressions of cash price

on futures price. Cash price projections are an average of the two methods and represent an annual average for 2011. Mineral and salt prices were based on recent price quotes.

Crop price projections, except for sunflowers, were based on the relevant futures closing prices and then adjusted for historical basis over 2006-2010. Oil sunflower crop price projections are for prices at harvest (October) at Goodland for 2011. Table 3 outlines the location-specific projections of harvest time crop prices (wheat: July; corn, grain sorghum, and soybeans: October). Short-run price projections are for harvest 2011, and based on October 1-31, 2010 deferred futures prices as well as historical basis over the 2006-2010 period. Long-run price projections are for the average harvesttime prices for the 2011 to 2015 period. The long-run crop prices are based on a weighted average of short-run price projections and historical cash prices.

Hay price projections in Table 1 are the January through October 2010 average Kansas Agricultural Statistics prices

Table 1. Prices for Short-Run Planning (2011)

Crop or Feed			Livestock		
Crop or Feed	Crop Price	Feed Price	Species	Weight (lbs)	Price
Wheat (bu)	a	-----	Steer calf (fall)	450	\$134.64
Grain sorghum (bu)	a	\$5.13	Steer calf (fall)	550	122.21
Grain sorghum (cwt)	a	9.16	Steer calf (fall)	650	115.38
Corn (bu)	a	5.50	Steer calf (spring)	550	132.45
Soybeans (bu)	a	-----	Feeder steer (spring)	650	121.70
Sunflowers-oil (cwt)	\$21.30	-----	Feeder steer (spring)	750	113.37
Alfalfa hay (ton)	108.13	108.13	Feeder steer (spring)	850	108.56
Brome hay (ton)	84.81	84.81	Market steer (annual)	1,225	102.21
Prairie/fescue hay (ton)	74.81	74.81	Heifer calf (fall)	450	121.12
Cane hay (ton)	b	93.81	Heifer calf (fall)	550	112.88
Corn silage (ton)	b	43.97	Heifer calf (fall)	650	109.96
Sorghum silage (ton)	b	35.18	Feeder heifer (spring)	650	110.64
SBM, 48% (ton)	-----	347.16	Feeder heifer (spring)	750	105.12
Salt (cwt)	-----	4.00	Market heifer (annual)	1,175	102.24
Mineral-vitamins (cwt)	-----	35.00	Cull cow (annual)	1,050	59.26
			Market hog (annual)	265	58.38
			Cull sow (annual)	480	50.39
			Market lamb (annual)	120	108.18
			Feeder lamb (annual)	60	119.00
			Cull ewe (annual)	100	45.75
			Dairy replacement heifer (annual)	1,250	1,240
			Milk (annual gross price)	100	16.41

^a See Table 3 for location-specific prices.

^b Crop prices for corn silage, sorghum (cane) silage, and cane hay are based on location-specific grain prices in Table 3. \$/T corn silage = 8 × \$/bu corn price. \$/T sorghum silage = 0.8 × \$/T corn silage. \$/T cane hay = (8/3) × \$/T sorghum silage.

for alfalfa and other hay. Brome hay is \$5 per ton above other hay and prairie hay is \$5 per ton below. Cane hay prices were determined from sorghum (cane) silage prices, which were based on corn silage prices, which were based on corn grain prices.

Beef calf price projections are Dodge City prices for October 2011 while feeder cattle projections are Dodge City prices for April 2011. Market cattle price projections are 2011 annual averages for western Kansas. Cull cow prices are 2011 annual averages for Kansas locations. Market hog

projections are for the Western Corn Belt average carcass, multiplied by 0.74, in 2011 plus a premium of \$2.75 per hundredweight. Cull sow price is a national annual average for 2011 and is based off of market hog futures prices. Price projections are based on relevant futures prices observed on the four Wednesdays in October 2010 used two ways, a) added to historical average (2007-2010) basis and b) used in historical (2001-2010) regressions of cash price on futures price. Cash price projections are an average of the two methods. Short-run sheep price projections are monthly

Table 2. Prices for Long-Run Planning (2011-2015)

Item		
Crop or Feed	Crop Price	Feed Price
Wheat (bu)	a	-----
Grain sorghum (bu)	a	\$3.97
Grain sorghum (cwt)	a	7.10
Corn (bu)	a	4.30
Soybeans (bu)	a	-----
Sunflowers, oil (cwt)	18.09	-----
Alfalfa hay (ton)	117.68	117.68
Brome hay (ton)	93.32	93.32
Prairie/fescue hay (ton)	83.32	83.32
Cane hay (ton)	b	73.42
Corn silage (ton)	b	34.42
Sorghum silage (ton)	b	27.53
SBM, 48% (ton)	-----	309.73
Salt (cwt)	-----	4.00
Mineral (cwt)	-----	27.50
	Weight (lbs)	Livestock Price
Beef		
Steer calf (fall)	450	127.47
Steer calf (fall)	550	114.76
Steer calf (fall)	650	108.25
Steer calf (spring)	550	126.10
Feeder steer (spring)	650	115.64
Feeder steer (spring)	750	107.30
Feeder steer (spring)	850	102.42
Market steer (annual)	1,225	92.74
Heifer calf (fall)	450	113.54
Heifer calf (fall)	550	105.78
Heifer calf (fall)	650	103.19
Feeder heifer (spring)	650	105.02
Feeder heifer (spring)	750	99.11
Market heifer (annual)	1,175	92.77
Cull cow (annual)	1,050	52.08
Swine		
Market hog (annual)	265	51.97
Cull sow (annual)	480	43.14
Sheep		
Market lamb (annual)	120	94.61
Feeder lamb (annual)	60	107.73
Cull ewe (annual)	100	34.72
Dairy		
Milk (annual gross price)	100	16.37
Replacement heifer (per head)	1	1,740

^a See Table 3 for location-specific prices

^b See footnote in Table 1 for procedures for projecting corn silage, sorghum silage, and cane hay prices.

average U.S. prices from November 2009 through October 2010 obtained from USDA and LMIC. Long-run sheep prices are monthly average U.S. prices from November 2005 through October 2010.

Milk price projections are for Kansas in 2011 and were based on average Class III and IV futures market prices observed on the four Wednesdays in October 2010 used two ways, a) added to historical average (2007-2010) milk basis and b) used in historical (2001-2010) regressions of cash price on a weighted-average futures price. Cash price

projections are an average of the two methods. The base cash price used is the Kansas mailbox price as reported by the Central Federal Milk Order No. 32. Short-run milk cow replacement projections are monthly average prices from November 2009 through October 2010 obtained from USDA and long-run prices are monthly average prices from November 2005 through October 2010.

Table 4 outlines the input costs used for the crop cost-return budgets in this handbook. Input costs were based on a survey of several input suppliers across Kansas.

Table 3. *Location-Specific Crop Prices for Short-Run and Long-Run Planning by Kansas Farm Management Association Region*

	2011 Harvest Price Projections, \$/bu (short-run)				2011-2015 Avg Harvest Price Projections, \$/bu (long-run)			
	Wheat	Corn	Milo	Soybeans	Wheat	Corn	Milo	Soybeans
Northwest & Southwest								
Scott City	\$6.49	\$4.75	\$4.30	\$10.26	6.08	\$3.96	\$3.51	\$9.07
North Central								
Beloit	6.59	4.55	4.36	10.61	5.87	3.76	3.53	9.23
South Central								
Hutchinson	6.72	4.60	4.49	10.83	6.23	3.83	3.66	9.54
Northeast								
Topeka	6.92	4.74	4.45	10.81	6.16	3.89	3.66	9.55
Southeast								
Emporia	6.62	4.63	4.31	10.69	6.15	3.83	3.48	9.44

Table 4. Input Costs for Forward Planning (MF Series)

Seed Item	Cost	Unit
Alfalfa	\$4.10	lb
Brome hay	0.89	lb
Canola (Roundup Ready)	6.68	lb
Corn	2.29	1,000 seeds
Corn (Gaucho treated)	2.88	1,000 seeds
Corn (Bt)	2.62	1,000 seeds
Corn (Roundup Ready)	2.63	1,000 seeds
Cotton (Roundup Ready)	1.12	1,000 seeds
Dry Edible Beans	0.59	lb
Grain sorghum	1.97	lb
Grain sorghum (Concep treated)	2.13	lb
Grain sorghum (Gaucho treated)	3.20	lb
Grain sorghum (Concep/Gaucho treated)	3.36	lb
Fescue hay	1.33	lb
Forage sorghum	0.93	lb
Soybeans	0.59	lb
Soybeans (Roundup Ready)	0.99	lb
Soybeans (STS)	0.83	lb
Soybeans (Roundup Ready/STS)	0.97	lb
Sunflowers-Confectionary	1.85	1,000 seeds
Sunflowers-Oil	1.36	1,000 seeds
Wheat (certified) ^a	0.22	lb

Input Item	Cost	Unit
N (Anhydrous) – Actual Ingredient (based on 82-0-0)	\$0.33	lb
N (Dry) – Actual Ingredient (based on 46-0-0)	0.47	lb
N (Liquid) – Actual Ingredient (based on 28-0-0 and 32-0-0)	0.52	lb
P (Dry) – Actual Ingredient (based on 18-46-0 and 11-52-0)	0.46	lb
P (Liquid) – Actual Ingredient (based on 10-34-0)	0.55	lb
K – Actual Ingredient (based on 0-0-60)	0.42	lb
Lime (cost/lb includes application)	0.01	lb
Labor	\$13.00	hour
Interest (operating)	7.0	%

^a *Wheat seed in budget = (Certified price × 60 × 25% + (location-specific cash price + \$1.36) × 25% + (location-specific cash price + \$0.58) × 50%)/60. The \$1.36 is the cost per bushel for cleaning and treating seed and the \$0.58 is the cost per bushel of cleaning only.*

Publications from Kansas State University are available on the World Wide Web at: www.ksre.ksu.edu

Publications are reviewed or revised annually by appropriate faculty to reflect current research and practice. Date shown is that of publication or last revision. Contents of this publication may be freely reproduced for educational purposes. All other rights reserved. In each case, credit Kevin Dhuyvetter et al., *Prices for Crop and Livestock Cost-Return Budgets*, Kansas State University, November 2010.

Kansas State University Agricultural Experiment Station and Cooperative Extension Service

MF-1013

November 2010

K-State Research and Extension is an equal opportunity provider and employer. Issued in furtherance of Cooperative Extension Work, Acts of May 8 and June 30, 1914, as amended. Kansas State University, County Extension Councils, Extension Districts, and United States Department of Agriculture Cooperating, Gary Pierzynski, Interim Director.