# Getting The FACTS for the COWCULATOR



#### **Southern States Cooperative**

**General Offices** 

Richmond, Virginia



#### The COWCULATOR



#### **And Southern States**

#### MAXIMUM PROFIT

## **Dairy Program**

The Cowculator was developed to overcome one of the greatest obstacles to maximum profits in dairying today: Overfeeding the poor-producing cow and underfeeding the high-producing cow. At the heart of the problem lay the question: "What is the correct amount of grain to feed each cow to get maximum profits from her based on the price of milk and grain?"

Dr. C. D. Caskey, Director of Research for Southern States, invented the Cowculator to make the necessary computations quickly and accurately.

The Cowculator is the heart of Southern States Maximum Profit Dairy Program. It has proven itself on many farms. It is not a substitute for programs like DHIA, EDPM, HIR, and DHIR. Rather, the Cowculator Program is designed to work *with* these other programs and add to their value—since the Cowculator takes the economic factors of milk and grain prices into consideration.

The Maximum Profit Dairy Program was developed by Southern States Cooperative to help its dairy feed patrons enjoy a higher standard of living. Right now, the Program is materially increasing the level of prosperity on scores of farms.

## Getting The Facts for the COWCULATOR...



The Cowculator can dramatically increase a dairyman's profits. It has proven this. However, to do so it must have facts and these facts must be *accurate*. Getting accurate facts for the Cowculator is an all-important job. The Cowculator is no better than the information given to it. *Be accurate*.

		S	OUTH	ERN	STAT	ES MA	XIMUM	PROFI	II DAIRY	PRUGRAM					
DAIRYMAN	DDINT		ADDRESS					PRIN	DATE						
Milk Price (Net at farm)		c	aut 6 Hay Quality Code						Тн	IS SPACE TO E	E FILLED IN	BY SOUTHERN	STATES AGENC	Y ·	
. Milk Price (Net at farm)									AGENCY						
Nutrient Value of Concent	rate (Grain)			8. S	ilage (	Juglity C	ode		PRINT						
Hav Cast (Value) at farm S ton Dry Matter in silage							%	ADDRESS							
5. Hay Feeding Rate								DATE MAILED REGIONAL OFFICE (All three copies)							
(Pe	r 100 lbs. b	ody wt. da	ily)			(Per	100 lbs. body	wt. daily)	Regular Dairy Feed Patron New Dairy Feed Pat. Not Presently						
11	12	13	COW'S	14	OWTH	1	1 PERPODUC	5 TIVE STAGE	16	17	18	19 CONCEN-	MAXIMUM	+	
	COW'S	DATE OF	CHE	CK (V)	ONE	COW'S	MONTHS T	O CALVING	SILAGE FED	MILK	BUTTERFAT	TRATE	PROFIT	MA	
COW NUMBER OR NAME	WEIGHT	FRESHEN	lst	2nd	3rd	IN	CHECK	V) ONE		PRODUCTION	1231	NOW BEING	(GRAIN)	AD	
	(Ibs.)	ING	CALF	CALF +	CALF	MONTHS	less than 3	more than 3	Day	Day	Percent	Pounds per Day	Pounds per Day		
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**FIRST** of all, you will need data sheets. On the data sheets you will record all information you gather for the Cowculator. Start by filling in dairyman's name, address and the date.

Chernsey Established Base 5010 3 97.627 %	pr below 3.5%.
a Betablished Base sold as Class 1 for each 1/10 of 1% about	'n
T Price \$ 6.10 3.5% Milk - Dire "	ales)
It " \$ 4.21 3.5% " Government and other surplus min	NET
(Includes profits from GUID	
LES. PRICE GROSS RCMPA (102+)5 7	8.17
TEST CLASS  \$ Hauling	
G. PREMIUM ( 19527 6.24 3028.08 Assignments	
3.7 Class I 40,004 4.35 1127.69 WGBA (15¢)	
Class II	
Non-Qualitying	78.17 5 4
4155.77	
TOTAL 74.451	



**1.** Determine net price of milk per cwt. at the farm. Enter after item 1 on the data sheet. Be sure to deduct hauling and other fees that are charged on a weight basis. If a percentage is sold for base at Class I price and another percentage for another price, use the blend price. In a base-surplus market, determine price that would be received if an *extra* 100 pounds of milk were produced. Enter that price.

**2.** Determine concentrate cost at farm. Enter after item 2 on the data sheet. (Generally dairy feed delivered in bulk is the best buy.)

**3.** Determine the nutrient value of concentrate and record the figure after item 3. If cows are getting a complete Southern States Feed such as 16% Dari-Krunch, use the energy or total digestible nutrient (TDN) content indicated on the open formula sheet available at the Southern States Cooperative Agency.

If a supplement mixed with grain is being fed, calculate the energy or TDN of the mixture.



**4.** Determine the hay cost (value) at farm. This should be expressed in dollars per ton, and recorded after item 4.

5. Determine the pounds of hay consumed by the *milking* herd daily for each 100 pounds of body weight.(A) If hay is hand fed: Weigh several bales or forks to get an average



weight. Then, using this average figure, determine the total pounds fed daily. Deduct wastage. Add individual weights of milking cows in herd and divide by 100. Then divide this figure into pounds of hay consumed. Enter your answer after item 5. (B) If hay is fed free choice: The average cow will consume 21/2 pounds of hay daily for each 100 pounds of body weight. Enter this figure after item 5 if no silage is fed. If silage is fed, reduce this figure 1 pound for each 3 pounds of silage fed per 100 pounds of body weight. If cows are on pasture, hay intake will be reduced, depending on pasture, height, quality and length of grazing period.

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		Grasses,	HAY QU Legunes a	CHART I ALITY COD and Grass-Le	DES gume Mixtur	35				
DATE OF CUTTING (SAME DATES APPLY FOR CHART II) Context Your Southern States Agency or County Agency for Dates that Apply					QUALITY CODES for DRY HAY*					
		Early V	egetative o	r Pasture Stag	e			57		
		Grasse	s Before He	ading or Legu	nes before Br	dding		50	)	
		Grasse	s in boot st	age or Legume	s in 1/10 Blc	on		43	8	
		Grasse	s in Bloom	or Legunes in	Full Bloom			3		
		All Ha	ys After Blo	om (Soft Daug	h Stage)			3		
		Ripe (H	sard Seed St	age)				25		
** * * * * *		260000	and third (	outings				4.		
Drop Une Grode II Ha	y is seriously Dom-	ogea By W	aomer.							
DESCRIPTION			USE CODES IN THIS COLUMN IF USE CODES IN THIS COLUMN IF PASTURE IS ONLY FORAGE FED (NO HAY OR SILLAGE)					IN THIS COLUMN AMOUNT OF SUPPL E (HAY, SILAGE, E' TION TO PASTURE		
		-	GRO	WTH AVAIL.	AMOUNT OF SUPPLEMENTAL FORM					
8			1. AMPLE	2. MEDIUH	3. SHORT	4. One Fourth Feeding	5. One Holf Feeding	6. Three Fourths Feeding	7. Fel Feed	
SEEDED LEGUME GRASS	Early Lush Leafy Growth	(	13	10	7	8	6	4	3	
COMPRESENTION	Fache Luth Loof			0	9	0	2	3		
PERMANENT	Growth	·	13	9	6	7 .	5	3	2	
	After Heading		10	6	4 .	5	4	2	1	
UNIMPROVED	Spring		10	7	4	5	4	3	2	
FERMALINI	summer, Fall		1	/		3	6		-	
PORARY (DATS, RYE,	Innature Leafy		13	10	1	8	6	4	3	
SUDAN, ETC.)	Second Growth		11	8	5	6	5	3	2	
L. Ample – Use this col . Medium – Use this co- could consu- J. Short – Use this colu 1. One Fourth Feeding –	umn when pasture i lumn when pasture ine. Cows would e mn when the growth Use this column * feeding. If forage if on *short* past	s in the le is slightly at appreci is very s when cows is hand fo ure.	afy actively inited or able amount hort (under to consume go ed increase	growing stag when it is evi is of suppleme hree inches) i od forage in t quality code b	e and cows ca dent that cow ntal forage if and cows sper he barn or yar by one if cows	n graze to fu are not get available, d considerat d at about or are on "amp	Il capacity ting all the de time (8 t de fourth the de" pasture	with little immature fo o 12 hours) rate of ful and decrea	effort, rage th grazing I barn ise by c	
. One Half Feeding - U	se this column whe	th cows co	onsume good	forage in the	farn or yard a	t about haif	the rate of 1	ull barn fee	eding.	
6. Three Fourths Feedin	g - Use this colum sumption in wi	n when co nter month	ws consume	good forage i	n the barn or	yard at about	three fourt	hs the rate	of con-	
7. Full Feeding – Use th month	nis colunn when co s.	ws are con	nsuming ess	entially as m	ich forage in I	he bam or y	ard as they	to in the w	inter	
1.1.1.1.1.										

6. Get hay quality code from chart number I and enter after item 6 on data sheet. 7. Get pasture quality code from chart number II and enter after item 7. 8. Get silage quality code from chart number III or IV and enter after item 8. 9. Determine dry matter of silage by consulting chart number III or IV. Record figure after item 9.

Be careful—there is a widespread tendency to overvalue forage. Evaluate forage as realistically as possible.



**10.** Determine the silage feeding rate. Your answer will be entered after item 10 or item 16, depending on feeding method. (A) If silage is fed free choice: The average cow will consume 7 pounds of silage for each 100 pounds of body weight when no hay is being fed. Enter this figure after item 10. If hay is fed, reduce this figure 3 pounds for each pound of hay being fed per 100 pounds of body weight. If cows are on pasture, silage intake will be reduced, depending on pasture height, quality and length of grazing period. (B) If silage is fed on an individual basis: Weigh several forks to find average weight of each fork full. Determine pounds fed each cow per day and enter this figure under column 16.



**11.** Record cow's name, barn number or eartag in column 11 on data sheet.



**12.** Enter cow's weight on data sheet under 12. Weight is determined by taping cow as shown. Pull tape snugly behind front legs. There will be a minimum of disturbance if owner, herdsman or milker does the taping.



**13.** Record the last freshening date in column 13 on the data sheet. **14.** In column 14, check where it applies: first calf . . . second calf . . . third calf or over. Then write in the cow's actual age in months. **15.** Check the space that applies in column 15: less than 3 months to calving . . . or, more than 3 months to calving. Use DHIA records or breeding chart. (Information for column 16 is covered under item 10.)



**17.** Determine daily milk production for each cow. Record the pounds per day in column 17. DHIA records may be used if weights are recent (within the last week). If such records are not available, weigh the milk for each cow at both evening and morning to arrive at daily milk production in pounds.



of Guernsey Established base Class I 97.627 %	
of Established Base sold as "	
ass I Price \$ 6.10	
lass II " D AMOI	
LES. PRICE GROSS PELOCATION 1020 15 78.17	
TEST CLASS 5 Fauling	
37 Class I 48,527 6.24 3028.00 Assignments	
Class II 25,924 4.33 VGBA (154)	
Non-Qualifying Other 78.17 \$	
4155.77 \$ 10.1	
TOTAL 74.451	

**18.** Record butterfat test for each cow in column 18. You can get this figure from DHIA records. If not available, get the average of the herd, based on last milk payment. Assign this figure to each cow.

**19.** Determine the pounds of concentrate (grain) being fed to each cow per day. If cows are being fed by scoops or other measures, determine weight of concentrate by actually weighing. Enter the figure in column 19.

When column 19 is completed, data sheet is ready for the Cowculator. (Columns 20 and 21 will be completed by the Regional Office using the Cowculator.



DOUBLE CHECK YOUR WORK. Make sure you have supplied all requested data.

Dairyman: Give all 3 copies of data sheet to your Cooperative Agency. Agency: Mail all 3 copies of data sheet to Regional Office.



Southern States Regional Office will promptly complete and return the "Cowculations" to the Agency. The dairyman will receive the data sheet with columns 20 and 21 completed. Divide the daily Maximum Profit Concentrate Feeding Rate by number of times concentrate is being fed per day. Record on feeding rate chart. Feed this amount of concentrate at each feeding.

The Adjustment Rate figure is important since it enables the dairyman to adjust his feeding rate and continue feeding at the maximum profit level as a cow's milk production increases or decreases. For each pound increase or decrease in daily milk production, the cow's daily concentrate feeding should be altered by the Adjustment Rate figure. For example: If the Adjustment Rate is .5 and milk production increases 8 pounds, then the feeding rate should be increased by 4 pounds. Daily milk production should be determined weekly if possible and no less than once a month.





Maximum profit can be obtained from this revolutionary program only if the necessary information is kept up-to-date. New data sheets should be filled out and "cowculated" under the following circumstances:

- **1.** For individual cows that have just freshened
- 2. When the milk price changes 50c per hundred or more
- 3. When concentrate cost changes \$5.00 per ton or more
- 4. When hay value changes \$5.00 per ton or more
- 5. When forage feeding program or feeding rate is changed
- 6. When forage quality codes change
- **7.** When butterfat test changes 5% or more

Together, the dairyman and the Southern States agency man, must work closely to keep the Cowculator Program up-to-date—to keep the increased profits coming in.

### The COWCULATOR

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heart of Southern States MAXIMUM PROFIT DAIRY PROGRAM



CAN DRAMATICALLY INCREASE A DAIRYMAN'S PROFITS