



# Western Beef Development Centre

## IF YOU'RE A YOUNG COW-CALF PRODUCER, CONSIDER JOINING CAIS

### Introduction

In many instances the CAIS “options notice” sent to young cow-calf producers has indicated they have an “estimated” 2003 reference margin that is negative. Consequently, the reaction of many of these producers has been to not participate in CAIS because of the expectation they would receive no support. *The intent of this article is to explain why these young farmers and ranchers should reconsider their decision to not participate in CAIS, given their actual reference margin is likely much larger than the “estimated” negative margin indicated on their CAIS options notice.*

Section I of this article describes how a reference margin is calculated. Section II then discusses how filing your margins in the reference years using the Modified Accrual Accounting Option (MAAO) vs. the cash option can potentially make your reference margin larger. Finally, Section III discusses how increasing the size of your farming operation in the past few years can also result in a larger reference margin and thus greater support levels from the CAIS program.

### Example Scenario

Jeff is a young farmer from the RM of Shell River near Roblin, MB. He began farming January 1<sup>st</sup> 2000 after finishing his university diploma. Since that time he has been expanding his cowherd and by 2003 his operation was calving 100 cows and haying 400 acres. Listed in Table 1 are the number of cows that calved and number of acres used for hay production in Jeff's operation over the past few years. Jeff has expanded his cowherd by purchasing bred cows and breeding bulls from a nearby neighbour.

In the fall of 2003 Jeff sold his weaned calves and did not earn the income he had hoped for. His father has told him he should participate in the CAIS program because he may qualify for some support payments. However, Jeff is still uncertain if he will participate, given his CAIS options notice stated his estimated reference margin is negative. However, Jeff has not yet realized: 1) he can file his reference margin using the modified accrual accounting option (MAAO) and 2) structural adjustments will be made to his margins from 2000 – 2002, given he has been expanding his productive capacity.

**Table 1. Jeff's Productive Capacity 2000 – 2003**

Year	2000	2001	2002	2003
# of Cows Calving	25	50	75	100
# of Acres -- Hay Production	100	200	300	400

### Section I – Calculating the Reference Margin of a Young Farmer

For individuals with five years of farming history the 2003 reference margin is calculated via the “Olympic Average,” meaning the high and low margin years between 1998 – 2002 are disregarded and the three remaining years of margin are summed and divided by three. However, Jeff only has three years of margin given he began farming in

2000. In this scenario Jeff's reference margin for 2003 would be based on the average of his margins earned between 2000 – 2002. His margin for each of the years from 2000 – 2002 are listed below. The options notice sent to Jeff indicated his reference margin was -\$23,667. These margins were calculated on a cash accounting system, i.e. CAIS eligible cash income less CAIS eligible cash expenses.

2000: -\$52,000                      2001: -\$16,500                      2002: -\$ 2,500

### Modified Accrual Accounting Option (MAAO)

If Jeff were to file his past three years of margins using the MAAO it will likely increase his 2003 reference margin, given MAAO recognizes the increased inventory from beginning to end of each year as his herd expanded. Recognition of the increased inventory is important, as it offsets the expansion costs of purchasing additional breeding stock or reduced income associated with retaining heifers for future breeding.

### Calculating the MAAO Reference Margin

#### Step #1

In order for Jeff to file his past three years of margins using MAAO, he must have a record of beginning and ending inventories for all cattle, feed, purchased inputs, etc., as well as changes in accounts payable and receivable. Jeff must also have a record of land base and cowherd production for these years. For simplicity, we will assume Jeff's purchased inputs as well as accounts receivable and payable remained constant throughout 2000 - 2002.

Listed below in Table 2 are Jeff's inventories for 2000 - 2002. Jeff has always sold all of his weaned calves and cull breeding stock in the fall and thus only has ending inventories each year of bred cows, breeding bulls and hay. For most producers, CAIS pre-determines the inventory values of their cattle for each individual year as described in the MAAO price list. CAIS does not recognize changes in the market value of cattle from beginning to end of year; rather they multiply the change in quantity of inventory from beginning to end of year by a year-end price. In Jeff's example, CAIS uses the December year-end price for each year, given his year-end is December 31<sup>st</sup>.

**Table 2. Jeff's Inventory 2000 – 2002**

Year: 2000	A	B	C = B - A	D	E = C X D
Category	Beginning Quantity	Ending Quantity	Change in Quantity	Fair Market Value	Inventory Value Change
Bred Cows	0	50	50	\$1,300	\$65,000
Breeding Bulls	0	3	3	\$1,900	\$5,700
Hay	0	300	300	\$40	\$12,000
				<b>Total Value Change</b>	<b>\$82,700</b>
Year: 2001	A	B	C = B - A	D	E=C X D
Category	Beginning Quantity	Ending Quantity	Change in Quantity	Fair Market Value	Inventory Value Change
Bred Cows	50	75	25	\$1,350	\$33,750
Breeding Bulls	3	4	1	\$2,100	\$2,100
Hay	300	600	300	\$45	\$13,500
				<b>Total Value Change</b>	<b>\$49,350</b>
Year: 2002	A	B	C = B - A	D	E=C X D
Category	Beginning Quantity	Ending Quantity	Change in Quantity	Fair Market Value	Inventory Value Change
Bred Cows	75	100	25	\$1,200	\$30,000
Breeding Bulls	4	5	1	\$2,200	\$2,200
Hay	600	900	300	\$75	\$22,500
				<b>Total Value Change</b>	<b>\$54,700</b>

## Step #2

To calculate each of Jeff's MAAO margins from 2000 - 2002, his annual change in inventory values (Column E of Table 2) will be added to the cash margins CAIS originally calculated in his options notice. Column C of Table 3 depicts this calculation.

**Table 3. Jeff's Modified Accrual Accounting Option Margins**

Year	A Cash Margins	B Inventory Value Changes	C = A + B MAAO Margins
2000	-\$52,000	\$82,700	\$30,700
2001	-\$16,500	\$49,350	\$32,850
2002	-\$2,500	\$54,700	\$52,200

## Step #3

CAIS then averages Jeff's MAAO margins from 2002 – 2002 to come up with his 2003 MAAO reference margin of \$38,583, which is significantly larger than the -\$23,667 calculated on his original 2003 CAIS options notice. In Jeff's case, this new MAAO reference margin of \$38,583 will also further increase once CAIS considers the change in productive capacity of his operation during the past few years.

## Part III - Changes in Productive Capacity

CAIS refers to the expansion or downsizing of a farming operation as a change in the operation's **productive capacity**. CAIS monitors changes in productive capacity of an operation because it attempts to simulate each of the producer's past years of margin to have the same level of productive capacity as the claim year (2003 in this example).

There are indicators CAIS uses to monitor changes in the productive capacity of the farming operation. For cow-calf producers, some of these indicators include seeded acres of crops and forages, as well as the number of cows and bred heifers calving during the year. For feedlots purchasing and selling feeder cattle, CAIS also recognizes sales of feeder cattle above and below 900 lbs/head. Changes in productive capacity are measured by what is called a **structure calculator**.

## Calculating Changes in Productive Capacity

### Step #4

When Jeff sends in his claim for 2003, CAIS will compare his productive capacity from 2000 – 2002 vs. 2003, to determine if there have been any changes. In Jeff's operation there has been a change in productive capacity as the number of cows calving has increased from 25 in 2000 to 100 in 2003 and the number of acres he has been haying has increased from 100 in 2000 to 400 in 2003 (refer back to Table 1).

### Step #5

CAIS then multiplies each year's difference in cows calved and acres used for hay production versus 2003 by corresponding Benchmarks Per Unit (BPU). A benchmark per unit is the average margin earned for the commodity in question in Jeff's area for each individual reference year. There are BPUs calculated for all provinces and for all indicators recognized by CAIS (some are calculated on a regional scope and some on a provincial scope). The Manitoba BPU per cow calved and BPU per forage acre in the RM of Shell River from 2000 – 2002 are listed in Table 4.

**Table 4. BPU's Applicable to Jeff**

Year	2000	2001	2002
BPU Per Cow Calved	\$348.00	\$320.78	\$274.83
BPU Per Forage Acre	\$38.21	\$18.20	\$75.19

**Step #6**

The difference in the number of cows calved multiplied by the BPU per cow and the difference in number of forage acres multiplied by the BPU per forage acre are then both added to the MAAO margin calculated for Jeff in each individual year. Therefore, the following calculations in Table 5 are applied to each of Jeff's margins from 2000-2002. Column H of Table 5 indicates Jeff's new margins for each year after the MAAO option has been chosen and the structural calculations applied.

**Table 5. Jeff's Adjusted Margins after Considering Productive Capacity Changes**

Year	A MAAO Margin	B Difference in Cows Calved vs. 2003	C BPU/ Birthed Cow	D = B X C Cow-Calf Structural Adjustment	E Difference in Forage Acres Vs. 2003	F BPU/ Forage Acre	G = E X F Forage Structural Adjustment	H=A+D+G Structurally Adjusted MAAO Margins
2000	\$30,700	75	\$348.00	\$26,100.00	300	\$38.21	\$11,463	\$68,263.00
2001	\$32,850	50	\$320.78	\$16,039.00	200	\$18.20	\$3,640	\$52,529.00
2002	\$52,200	25	\$274.83	\$6,870.75	100	\$75.19	\$7,519	\$66,589.75

**Step #7**

CAIS now averages Jeff's margins from Column H of Table 5 to arrive at his newly adjusted 2003 MAAO reference margin of \$62,461.

**Step #8**

Finally, if CAIS detects more than a 5% change and \$1,000 difference between the structurally adjusted MAAO reference margin of \$62,461 and the unadjusted MAAO margin of \$38,583, the structural calculation is applied. In this case both criteria would be met and Jeff's new margin would be \$62,461, which is significantly larger than the estimated reference margin of -\$23,667 stated on his original options notice.

**Closing**

The structure calculator and MAAO option can significantly increase your reference margin if you are a young cow-calf producer who has been expanding your operation in the past few years. CAIS has extended its deadlines to participate in the 2003 and 2004 programs to November 30, 2004; therefore any young cow-calf producers who have not yet joined CAIS should at least re-consider participating in the program.

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