

The following example will step through multiple crop year rate capping process. We are given the following 35's for crop years 2000 and 2001 for the listed type and practice. An abbreviated Record 1C (not all prior yield and rate fields are shown) is also displayed for each year

2000 APH rates for wheat in Box Butte Co., Nebraska

TYPE: (997) No Type Specified		PRAC: (005) Summerfallow
14.0 & Below	R01	0.518
15.0 - 19.0	R02	0.401
20.0 - 24.0	R03	0.264
25.0 - 28.0	R04	0.190
29.0 - 34.0	R05	0.146
35.0 - 38.0	R06	0.122
39.0 - 43.0	R07	0.106
44.0 - 48.0	R08	0.093
49.0 & Above	R09	0.088

2001 APH rates for wheat in Box Butte Co., Nebraska

Type: (997)NTS -- No Type Specified PRAC: Summerfallow -- SF (005)

REFERENCE YIELD(BU)	31.5
REFERENCE RATE	0.128
EXPONENT	-1.924
FIXED RATE LOAD	0.023

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Capping Example # 2

Year 1

CY 2001

The 1C record (abbreviated fields and field names)

crop yr	state	county	crop	IP	prac	type	ref yld	ref rate	exponent	sign	fixed rate	pr yld 3	pr bpr 3	pr yld 4	pr bpr 4	pr yld 5	pr bpr 5	ref yld	ref rate	exponent	sign	fixed rate	
2001	31	13	0011	90	005	997	31.5	0.128	1.924	-	0.023	24.0	0.264	28.0	0.190	34.0	0.146	31.5	0.128	1.924	-	0.023	
																			Initial year same as current				

CY 2001

Assume APH Yield of : 25 bu

Calculate the current year's yield ratio (rounded to 2 decimals)

$$25/31.5 = .79$$

1

Calculate the current year's uncapped base premium rate (rounded to 8 decimals)

$$[.79^{*-1.924}] * .128 + .023] = .22445379$$

2

Refer to prior year capped APH rate for 25 bu and multiply by 1.2

$$[.190 * 1.2] = .22800000$$

3

Calculate the prior years yield ratio

$$25/31.5 = .79$$

4

Calculate the prior years continuous rating base premium rate and multiply by 1.2

$$[.79^{*-1.924}] * .128 + .023] * 1.2 = .26934455$$

5

Determine the preliminary base premium rate (lower of 2, 3 and 5)

$$[.22445379, .228, .26934455] = .22445379$$

6

Year 2

CY 2002

The 1C record (abbreviated fields and field names)

crop yr	state	county	crop	IP	prac	type	ref yld	ref rate	exponent	sign	fixed rate	pr yld 3	pr bpr 3	pr yld 4	pr bpr 4	pr yld 5	pr bpr 5	ref yld	ref rate	exponent	sign	fixed rate
2002	31	13	0011	90	005	997	31.5	0.128	1.924	-	0.023	24.0	0.317	28.0	0.228	34.0	0.175	31.5	0.128	1.924	-	0.023
												2000 rates updated by 20%					Capped	2001 continuous rate function				

CY 2002

Assume APH Yield of : 23 bu

Calculate the current year's yield ratio (rounded to 2 decimals)

$$23/31.5 = .73$$

1

Calculate the current year's uncapped base premium rate (rounded to 8 decimals)

$$[.73^{*-1.924}] * .128 + .023 = .25751833$$

2

Refer to prior year capped APH rate for 27 bu and multiply by 1.2

$$[.317 * 1.2] = .38040000$$

3

Calculate the prior years yield ratio

$$23/31.5 = .73$$

4

Calculate the prior years continuous rating base premium rate and multiply by 1.2

$$[.73^{*-1.924}] * .128 + .023] * 1.2 = .30902199$$

5

Determine the preliminary base premium rate (lower of 2, 3 and 5)

$$[.25751833, .38040000, .30902199] = .25751833$$

6

Year 3

CY 2003

The 1C record (abbreviated fields and field names)

crop yr	state	county	crop	IP	prac	type	ref yld	ref rate	exponent	sign	fixed rate	pr yld 3	pr bpr 3	pr yld 4	pr bpr 4	pr yld 5	pr bpr 5	ref yld	ref rate	exponent	sign	fixed rate
2003	31	13	0011	90	005	997	35	0.133	2.000	-	0.022	24.0	0.380	28.0	0.274	34.0	0.210	31.5	0.128	1.924	-	0.023
												2000 rates updated by 20%					Capped	2002 continuous rate function				

CY 2003

Assume APH Yield of : 25 bu

Assume RMA updated reference yield to 35 bu and rate variables

Calculate the current year's yield ratio (rounded to 2 decimals)

$$25/35 = .71$$

1

Calculate the current year's uncapped base premium rate (rounded to 8 decimals)

$$[.71^{**} - 2.000] * .133 + .022] = .28583654$$

2

Refer to prior year capped APH rate for 29 bu and multiply by 1.2

$$[.274 * 1.2] = .32880000$$

3

Calculate the prior years yield ratio

$$25/31.5 = .79$$

4

Calculate the prior years continuous rating base premium rate and multiply by 1.2

$$[.79^{**} - 1.924] * .128 + .023] * 1.2 = .26934455$$

5

Determine the preliminary base premium rate (lower of 2, 3 and 5)

$$[.28583654, .32880000, .26934455] = .26934455$$

6

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Year 4

CY 2004

The 1C record (abbreviated fields and field names)

crop yr	state	county	crop	lp	prac	type	ref yld	ref rate	exponent	sign	fixed rate	pr yld 3	pr bpr 3	pr yld 4	pr bpr 4	pr yld 5	pr bpr 5	ref yld	ref rate	exponent	sign	fixed rate			
2004	31	13	0011	90	005	997	35	0.133	2.000	-	0.022	24.0	0.320	28.0	0.244	34.0	0.178	35	0.133	2.000	-	0.022			
																	2000 rates updated by 20%			Capped	2003 continuous rate function				

CY 2004

Assume APH Yield of : 25 bu

Calculate the current year's yield ratio (rounded to 2 decimals)

$$25/35 = .71$$

1

Calculate the current year's uncapped base premium rate (rounded to 8 decimals)

$$[.71^{**}-2.000] * .133 + .022] = .28583654$$

2

Refer to prior year capped APH rate for 27 bu and multiply by 1.2

$$[.244 * 1.2] = .292800000$$

3

Calculate the prior years yield ratio

$$25/35 = .71$$

4

Calculate the prior years continuous rating base premium rate and multiply by 1.2

$$[.71^{**}-2.000] * .133 + .022] * 1.2 = .34300385$$

5

Determine the preliminary base premium rate (lower of 2, 3 and 5)

$$[.28583654, .29280000, .34300385] = .28583654$$

6