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2002–2005 Orchardgrass Variety Trial Four-year Summary

Royal Slope, WA

| <u>Variety</u> | 2002 total yield | 2003 total yield | 2004 total yield | 2005 total yield | 4-yr Total |
|----------------|------------------|------------------|------------------|------------------|------------|
| | (2 cuts) | (3 cuts) | (4 cuts) | <u>(3 cuts)</u> | |
| Icon | 3.7 | 7.5 | 7.1 | 7.0 | 25.3 |
| Century | 3.7 | 7.8 | 6.6 | 7.1 | 25.3 |
| Crown Royale | 3.8 | 7.2 | 6.2 | 7.0 | 24.1 |
| Potomac | 3.8 | 7.4 | 6.6 | 6.2 | 24.0 |
| Benchmark | 3.5 | 7.5 | 6.0 | 6.4 | 23.4 |
| Bronc | 3.7 | 7.0 | 6.0 | 6.6 | 23.3 |
| Pizza | 3.5 | 6.7 | 6.3 | 6.2 | 22.7 |
| Quantum | 3.6 | 6.3 | 5.5 | 6.0 | 21.4 |
| | | | | | |
| Mean | 3.7 | 7.3 | 6.3 | 6.5 | 23.7 |
| lsd(.05) | ns | ns | 1.0 | 0.3 | 1.6 |
| CV% | 10 | 11 | 9 | 10 | 7 |
| | | | | | |

Significant differences in forage yield were measured between varieties in 2004 and 2005.

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ORCHARDGRASS VARIETY TRIAL 2005 Hay Yields

Royal Slope, WA

| | | Hay t/ac 10 | Hay t/ac 100% Dry basis ————— | | |
|--------------------------|-----------------|-------------------------------|-------------------------------|------------------|--|
| <u>Variety</u> | <u>May 23</u> | July 13 | August 29 | 3-Cut Total | |
| Century | 3.5 | 1.6 | 2.0 | 7.1 | |
| Icon | 3.6 | 1.5 | 1.8 | 7.0 | |
| Crown | 3.6 | 1.5 | 1.9 | 7.0 | |
| Royale | 3.3 | 1.6 | 1.7 | 6.6 | |
| Bronc | 3.5 | 1.3 | 1.6 | 6.4 | |
| Benchmark | 3.1 | 1.4 | 1.7 | 6.2 | |
| Potomac Pizza | 3.2 | 1.3 | 1.7 | 6.2 | |
| Quantum | 3.0 | 1.3 | 1.7 | 6.0 | |
| Mean Lsd (.05) CV% | 3.4 ns 11 | 1.4 ns 22 | 1.8 0.2 12 | 6.5 0.3 10 | |

Orchardgrass Variety Trial Forage Quality, Maturity and Plant Color

| | <u>Th</u> | Three-Cut Averages, 2005 | | Maturity and Plant Color | | |
|----------------|------------|--------------------------|------|--------------------------|---------------------------------|---|
| <u>Variety</u> | <u>%CP</u> | %ADF | %NDF | <u>RFQ</u> | <u>% Headed</u> May 12, 2004 | <u>Plant Color</u> ~ <u>2-year average</u> |
| Pizza | 15.2 | 37.3 | 61.8 | 106 | 15 | 2.2 |
| Potomac | 15.9 | 37.2 | 62.4 | 106 | 35 | 1.3 |
| Quantum | 15.8 | 37.7 | 62.0 | 105 | 6 | 2.6 |
| Century | 16.0 | 36.8 | 62.0 | 104 | 47 | 1.4 |
| Crown Royale | 15.6 | 37.8 | 62.5 | 104 | 32 | 1.8 |
| Bronc | 16.6 | 36.0 | 61.8 | 104 | 18 | 2.3 |
| Benchmark | 17.1 | 36.0 | 62.2 | 100 | 37 | 1.8 |
| Icon | 17.7 | 36.2 | 60.8 | 100 | 40 | 1.9 |
| Mean | 16.2 | 37.0 | 61.9 | 104 | 29 | 1.9 |
| LSD (.05) | 2.5 | ns | ns | ns | 11 | 0.5 |
| CV% | 17 | 6 | 5 | 8 | 57 | 32 |

CP = Crude protein.

ADF = Acid Detergent Fiber. ADF provides an estimate of digestibility. The lower the ADF, the more digestible is the forage.

NDF = Neutral Detergent Fiber. NDF provides an estimate of intake. The lower the NDF, the more of the forage an animal will consume.

RFQ = Relative Forage Quality. RFQ is an index that combines digestibility of the NDF fraction, digestible protein, digestible non-fiber carbohydrates and dry matter digestibility. It has advantages over the RFV index in that it takes into account the effects that cool vs. warm growing conditions have on the digestibility of plant fiber. RFQ can be used in a similar way as RFV.

 \sim Color scored 1-3, with 1 = blue green and 3 = bright green.

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