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**NEW YORK CORN SILAGE HYBRID TESTS – 2007**

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## NEW YORK CORN SILAGE HYBRID TESTS – 2007

Corn silage hybrids were tested at four locations in New York in 2007. We evaluated 95 to 115-day hybrids in relative maturity (RM) at the Aurora Research Farm (Cayuga Co.) and Southview Farms in Groveland Station (Livingston Co.). Both sites average about 2400 growing degree days (GDD, 86-50° system) from May through September. We evaluated 75 to 100 day hybrids in RM at John Greenwood's farm in Madrid (St. Lawrence Co.) and at the Miner Institute at Chazy (Clinton Co.). Both sites average about 2100 GDD from May through September. All seed companies were invited to enter their hybrids in these tests at a fee.

### MATERIALS AND METHODS

We planted all hybrids with a 2-row plot planter at about 36,000 plants/acre to achieve harvest populations of 32,000-34,000 plants/acre. The Groveland Station site was planted on 3 May and the Aurora site on 4 May. The Madrid site was planted on 8 May and the Chazy site on 12 May. All hybrids were grouped within a 5-day RM (i.e. 91-95 day RM, 96-100, etc.), and planted in a randomized complete block design with four replications. Each individual plot consisted of two 22-ft. rows spaced 30 inches apart. Each individual plot received about 250 lbs/acre of 10-20-20 at planting. The Aurora and Chazy site received about 140 lbs N/acre of sidedressed N at the 4 to 5-leaf (V4 to V5) stage. The Groveland Station and Madrid sites were well-manured dairy sites so they received no sidedressed N. We used preemergence herbicides and hand-weeding to control weeds.

Both rows, trimmed back to an 18-foot length, of each hybrid were harvested for silage yield with a retrofitted 3-row New Holland Chopper with a platform and a weigh- basket, mounted on load cells. The goal was to harvest all hybrids in the 60-70% moisture range and only a very few of the hybrids were outside that range at each site.

The Aurora site was harvested on three dates: 95-100 day RM and 101-105 day RM groups on 27 August, 106-110 day RM group on 29 August, and 111-115 day RM group on 31 August. The 95-100 and 101-105 day RM hybrids at Groveland Station were harvested on 5 September and the 106-110 and 111-115 day RM hybrids on 7 September. All hybrids were harvested at Madrid on 11 September and at Chazy on 14 September.

An approximate 10,000 g well-mixed sample was originally collected from each plot. The 10,000 g sample was then ground further in the field with a chipper-shredder. An approximate 1,000 g sub-sample was then weighed with a gram-scale in the field and stored on ice packs in a cooler or refrigerated in a generator-powered freezer (samples were not frozen). At the end of each day, the samples were brought back to a Cornell Research Farm for drying. The samples were dried at 140°F in a forced air drier to constant moisture and then weighed to determine moisture content of each sample.

Samples were processed and analyzed by Cumberland Valley Analytical Services, Inc. Samples were analyzed by wet chemistry for neutral detergent fiber (NDF), according to procedures by Van Soest et al. (1991). Samples were incubated for 30 hours at 39°F in a buffered rumen fluid, according to procedures by Van Soest and Robertson (1980) using a flask system and Van Soest buffer. Following fermentation, residues were analyzed for NDF by wet chemistry to determine 30-hour NDF digestibility (dNDF). The NDF digestibility was calculated as  $([1 - \text{NDF residue}/\text{initial NDF}] \times 100)$ . Crude protein (CP), starch, ether extract, and ash were determined using NIRS. Milk per ton and milk per acre were then calculated using the Milk2006 spreadsheet program (Tables 2-5).

Data were analyzed using the PROC GLM procedure of SAS. The LSD values for separating hybrid means were generated at the  $P = 0.10$  level. Hybrids are considered above-average for calculated milk yield, milk/ton, or silage yield when the hybrid's value is 101% or more of the mean value within their RM group.

## RESULTS AND DISCUSSION

### Aurora and Groveland Station

The 2007 growing season at both locations was warmer and much drier than normal (Table 1). At Aurora, only 7.91 inches of precipitation was recorded from May 1<sup>st</sup> through August 31<sup>st</sup> with all months averaging 1.0 to 2.5 inches below normal. Also, all months, except July, had above average GDD. At Dansville (8 miles south of Groveland Station), only 8.13 inches of precipitation were recorded from May 1<sup>st</sup> through September 7<sup>th</sup>. Also, all months, except July, had above-average GDD. Despite the exceptionally dry growing season, overall silage yields averaged 22.8 tons/acre on a well-drained but somewhat shallow soil at Aurora and 27.5 tons/acre on the well-drained and deep soil at Groveland Station. The cool July conditions (2.2 degrees °F below normal at both sites), contributed in part to the relatively high silage yields under the exceedingly dry conditions.

Nine hybrids at Aurora and six hybrids at Groveland Station had above-average calculated milk yields in the 94-100 day RM group in 2007 (Tables 2 and 3). The hybrids, TMF2T497 from Mycogen, 54T42 from Dyna-Gro, 946LRR from LICA, HL S047 from Hyland, and 8688GT from Garst had above-average milk yields at both sites. The brown midrib hybrid, F2F485 from Mycogen, HL S42 from Hyland, 38B87 from Pioneer, and N39-Q1, an NK brand, had above-average milk yields in the 94-100 day-RM group at Aurora. The hybrid, 8679CRWRR from Garst, also had above-average milk yield at Groveland Station. When average across sites, TMF2T497, 54T42, and 946LRR, had much-above-average silage yields and F2F485 had a much-above-average milk/ton value. The 17 hybrids in the 94-100 day-RM group averaged 22.6 tons/acre at Aurora and 26.6 tons/acre at Groveland Station.

Nine hybrids at Aurora and 10 hybrids at Groveland Station had above-average milk yields in the 101-105 day RM group (Tables 2 and 3). The hybrids, HL S058 and HL S067 from Hyland, 35F40 from Pioneer, 555XY from Doebler's, 55P86 from Dyna-Gro, TA557-00F from T.A. Seeds, and the brown midrib hybrid, F2F566 from Mycogen, had above-average milk yields at both sites. The hybrids, DKC52-63(RR2/YGCB), a DEKALB brand, and N48-R3, an NK brand, had above-average milk yields at Aurora. The hybrids, 35A34 from Pioneer, 10 BS7 from LICA, and DKC55-12(YGCB), a DEKALB brand, had above-average milk yields at Groveland Station. When averaged across sites, HL S058, HL S067, TA557-00F, and 55P86 had above-average silage yields and milk/ton values. The 16 hybrids in the 101-105 day-RM group averaged 22.7 tons/acre at Aurora and 27.1 tons/acre at Groveland Station.

Four hybrids at Aurora and eight hybrids at Groveland Station had above-average milk yields in the 106-110 day RM group (Tables 2 and 3). The hybrids, 6277XRR from Growmark FS, 632ARR from Doebler's, and 34A89 from Pioneer had above-average milk yields at both sites. The hybrid, 34A20 from Pioneer, had above-average milk yields at Aurora. The hybrids, 8381HTLL from Garst, DKC57-47(RR2), a DEKALB brand, 33D14 and 33T59 from Pioneer and F2F610 from Mycogen had above-average milk yields at Groveland Station. When averaged across sites, 6277XRR, 632ARR, 33D14 and 33A89 had much-above-average silage yields in the 106-110 day RM group. When averaged across sites, the brown midrib hybrid, F2F610, had much-above average and 33T59 had above-average milk/ton values. The 13 hybrids in the 106-110 –day-RM group averaged 22.5 tons/acre at Aurora and 28.4 tons/acre at Groveland Station.

Four hybrids at Aurora and four hybrids at Groveland Station had above-average milk yields in the 111-115 day RM group (Tables 2 and 3). The hybrids, TA689-00F from T.A. Seeds, 33A88 from Pioneer, and DKC61-66(RR2/YGPL), DEKALB brand, had above-average milk yields at both sites. The hybrid, 57P12 from Dyna-Gro, had above-average milk yields at Aurora. The hybrid, 34B38 from Pioneer, had above-average milk yield at Groveland Station. When averaged across sites, TA689-00F, 34B38, and 33A88 had above-average silage yields and milk/ton values. The nine hybrids in the 111-115 day RM group averaged 22.8 tons/acre at Aurora and 27.5 tons/acre at Groveland Station. Overall, the 94-100-day RM group yielded as well as the later-maturing hybrid groups at Aurora probably because the earlier hybrids matured earlier, which allowed them to partially escape the very droughty conditions during the

grain-filling period in August. The 106-110 day RM group yielded the highest at the Groveland Station, probably in part because the deeper soils at this site prevented severe stress from developing during the grain-filling period in August so the later-season hybrids could express their yield potential.

## **Madrid and Chazy**

The 2007 growing season in Northern NY was more favorable for corn growth than in central/western NY (Table 1). Temperatures were ideal throughout most of the growing season at both sites. Although three of the four months were dry at Canton (5 miles from the Madrid site), 7.20 inches of precipitation were recorded in July, insuring a high-yielding corn crop at Madrid. At Chazy, growing conditions were almost perfect for corn growth until well into August when dry conditions set in. Nevertheless, corn yields were also excellent at Chazy.

Two hybrids at Madrid and at Chazy had above-average milk yields in the 75-85 day RM group (Tables 4 and 5). The hybrids, HL S011 from Hyland and 377BWR from Doebler's, had much above-average milk yields at both sites. The hybrid, TA240-11 from T.A. Seeds, had much above-average milk yield at Madrid. The hybrid, 286XRR from Doebler's, had much above-average milk yields at Chazy. When averaged across sites, HL S011, TA240-11, and 377BWR had much-above-average silage yields. The six hybrids in the 75-85 day RM group averaged 27.4 tons/acre at Madrid and 23/1 tons/acre at Chazy.

Five hybrids at Madrid and at Chazy had above-average milk yields in the 86-90 day RM group (Tables 4 and 5). The hybrids, HL S034 from Hyland, 38N87 from Pioneer, HL SR35 from Hyland, and 8866RR from Garst, had above-average milk yields at both sites. The hybrid, TA270-11 from T.A. Seeds, had much above-average milk yields at Madrid. The hybrid, 52P81 from Dyna-Gro, had above-average milk yields at Chazy. When averaged across sites, HL S034, HL SR35 and 38N87 had much above-average silage yields, and 38N87 had above-average milk/ton values. The seven hybrids in the 86-90 Day RM group averaged 28.0 tons/acre at Madrid and 25.2 tons/acre at Chazy.

Nine hybrids at Madrid and at Chazy had above-average milk yields in the 91-95 day RM group (Tables 4 and 5). The hybrids, TMF2N422 from Mycogen, TA310-02F from T.A. Seeds, 38K47 from Pioneer, 946LRR from LICA, 53K69 from Dyna-Gro, and TMF2L416 from Mycogen, had above-average milk yields at both sites. The hybrids, EX2604 from Growmark FS, DKC45-82 (RR2), a DEKALB brand, and N29-A2, an NK brand, had above-average milk yields at Madrid. The hybrids, 53B04 from Dyna-Gro, N27-B5, an NK brand, and DKC41-57 (YGPL/RR2), a DEKALB brand, had above-average milk yields at Chazy. When averaged across sites, TMF2N422, TA310-02F, 38K47, 946LRR, TMF2L416, 53K69, and EX2604 had above-average silage yields in the 91-95 day RM group. When averaged across sites, TMF2N422 and N29-A2 had above-average milk/ton values. The 18 hybrids in the 91-95 day RM group yielded 27.4 tons/acre at Madrid and 24.1 tons/acre at Chazy.

Four hybrids at Madrid and two hybrids at Chazy had above-average milk yields in the 96-100 day RM group (Tables 4 and 5). The hybrids, DKC50-48 (YGCB/RR2), a DEKALB brand, and 964L from LICA, had above-average milk yields at both sites. The hybrids, 99 S7 and 98 BS7 from LICA had above-average milk yields at Chazy. When averaged across sites, 964L, DKC50-48 (YGCB/RR2), and 99 S7 had above-average silage yields in the 96-100 day RM group. When averaged across sites, DKC50-48 (YGCB/RR2) and 98 BS7 had above-average milk/ton values. The six hybrids in the 96-100 day RM group averaged 28.5 tons/acre at Madrid and 24.4 tons/acre at Chazy. Overall, the 96-99 day RM group yielded the highest at Madrid and the 86-90 day RM group yielded the highest at Chazy.

## **CONCLUSION**

The 2007 growing season in New York was warm and excessively dry in central/western NY. Nevertheless, yields were surprisingly high in part because of the cool and only moderately dry July conditions. In Northern NY, the growing season was warm and only dry in August and yields were quite

high. The results from this study reflect well the yield and quality of corn silage that was planted during the first half of May of 2007 in New York.

The results of this study will be incorporated into the recommended corn silage tables in our annual Cornell Guide for Integrated Field Crop Management. We only list hybrids that have above-average relative calculated milk yields in their hybrid RM group (i.e. 96-100, 101-105 day RM, etc.). We also list the relative silage yields and milk/ton values for the recommended hybrids. Look for the updated recommended hybrids first in our newsletter, **What's Cropping Up?** (soon at our web site: [www.fieldcrops.org](http://www.fieldcrops.org)). We urge all seed companies to participate in our corn silage testing program in 2008 so we can provide the best information to our New York dairy producers.

Table 1. Monthly precipitation and growing degree days (GDD) at the four test sites in 2007.

| Month        | Precipitation |             |              |              | GDD (86-50 F) |             |             |             |
|--------------|---------------|-------------|--------------|--------------|---------------|-------------|-------------|-------------|
|              | Groveland     |             |              |              | Groveland     |             |             |             |
|              | Aurora        | Station*    | Madrid**     | Chazy***     | Aurora        | Station     | Madrid      | Chazy       |
| May          | 0.94          | 0.72        | 2.26         | 2.42         | 386           | 398         | 296         | 318         |
| June         | 2.33          | 1.55        | 1.76         | 3.80         | 577           | 579         | 519         | 541         |
| July         | 2.77          | 3.87        | 7.20         | 5.94         | 593           | 605         | 535         | 553         |
| August       | 1.87          | 1.99        | 0.90         | 1.22         | 649           | 653         | 570         | 568         |
| <b>Total</b> | <b>7.91</b>   | <b>8.13</b> | <b>12.12</b> | <b>13.38</b> | <b>2205</b>   | <b>2235</b> | <b>1920</b> | <b>1978</b> |

\* Weather data from Dansville.  
 \*\* Weather data from Canton.  
 \*\*\*Weather data from Peru for July and August

Table 2. Silage yield, milk/ton, and calculated milk yield for corn silage hybrids at Aurora, NY in 2007.

| Brand/<br>Company      | Hybrid      | Silage   |          | 30 hour |      |     | Starch | Milk2006 | Milk2006   |
|------------------------|-------------|----------|----------|---------|------|-----|--------|----------|------------|
|                        |             | Yield    | Moisture | NDF     | dNDF | CP  |        | Milk/ton | Milk Yield |
|                        |             | tons @65 | %DM      | %DM     | %    | %DM | %DM    | lbs/ton  | lbs/acre   |
| <b>94 to 100-d RM</b>  |             |          |          |         |      |     |        |          |            |
| Hyland                 | HL S047     | 24.0     | 60.0     | 43.8    | 66.6 | 7.5 | 33.0   | 3278     | 27547      |
| DynaGro                | 54T42       | 23.8     | 64.1     | 42.4    | 65.0 | 7.7 | 33.6   | 3305     | 27534      |
| Mycogen                | F2F485      | 21.6     | 61.6     | 41.3    | 79.0 | 8.3 | 34.7   | 3631     | 27479      |
| LICA                   | 946 LRR     | 24.2     | 56.5     | 45.7    | 65.5 | 6.9 | 32.8   | 3233     | 27430      |
| Hyland                 | HL SR42     | 23.1     | 61.3     | 41.2    | 67.8 | 7.6 | 35.5   | 3387     | 27377      |
| Garst                  | 8688 GT     | 23.6     | 62.6     | 42.3    | 64.7 | 7.2 | 34.3   | 3305     | 27215      |
| Pioneer                | 38B87       | 22.8     | 56.4     | 40.5    | 65.1 | 7.7 | 37.6   | 3376     | 26904      |
| Mycogen                | TMF2T497    | 23.7     | 62.1     | 45.5    | 65.1 | 7.3 | 31.0   | 3225     | 26665      |
| NK Brand               | N39-Q1      | 23.5     | 57.6     | 43.6    | 63.5 | 7.7 | 33.8   | 3208     | 26455      |
| Pioneer                | 38H72       | 23.0     | 58.7     | 42.1    | 62.1 | 7.4 | 35.8   | 3254     | 26191      |
| Growmark FS            | 4955 XRR    | 22.1     | 60.9     | 42.2    | 66.5 | 7.6 | 34.7   | 3343     | 25903      |
| Hyland                 | HL S041     | 21.5     | 60.9     | 43.5    | 67.3 | 7.6 | 33.5   | 3328     | 25071      |
| LICA                   | 98 BS 7     | 21.4     | 61.8     | 44.1    | 68.1 | 7.7 | 32.4   | 3334     | 24970      |
| TA Seeds               | TA 489-00F  | 22.0     | 62.0     | 44.6    | 64.9 | 7.7 | 31.5   | 3221     | 24843      |
| LICA                   | 99 S 7      | 21.0     | 62.9     | 43.6    | 67.5 | 7.6 | 32.1   | 3336     | 24561      |
| LICA                   | 964 L       | 21.1     | 60.5     | 45.2    | 65.0 | 7.4 | 31.7   | 3222     | 23835      |
| Garst                  | 8679 CRW RR | 21.4     | 65.8     | 43.8    | 61.5 | 7.8 | 31.4   | 3165     | 23729      |
| <b>101 to 105-d RM</b> |             |          |          |         |      |     |        |          |            |
| Hyland                 | HL S058     | 25.0     | 66.0     | 46.7    | 63.4 | 7.1 | 28.1   | 3144     | 27483      |
| DEKALB                 | DKC52-63    | 23.9     | 61.8     | 42.0    | 63.5 | 7.5 | 35.0   | 3283     | 27447      |
| Pioneer                | 35F40       | 23.0     | 59.9     | 42.4    | 67.4 | 7.3 | 35.4   | 3341     | 26866      |
| DynaGro                | 55P86       | 24.1     | 64.2     | 44.8    | 62.5 | 7.3 | 31.5   | 3177     | 26814      |
| Hyland                 | HL S067     | 24.0     | 63.7     | 47.4    | 65.8 | 7.6 | 27.8   | 3184     | 26799      |
| Doebler's              | 555XY       | 22.7     | 62.7     | 41.3    | 65.1 | 7.2 | 35.4   | 3343     | 26548      |
| Mycogen                | F2F566      | 21.7     | 66.6     | 44.6    | 76.8 | 7.9 | 29.9   | 3480     | 26399      |
| NK Brand               | N48-R3      | 22.8     | 60.1     | 40.9    | 62.9 | 7.5 | 35.8   | 3270     | 26126      |
| TA Seeds               | TA 557-00F  | 24.0     | 60.1     | 47.2    | 62.4 | 7.4 | 29.6   | 3100     | 26053      |
| Garst                  | 8571 CB LL  | 22.7     | 65.9     | 44.4    | 65.9 | 7.5 | 30.9   | 3266     | 25964      |
| LICA                   | UFO 1056 B  | 20.5     | 63.1     | 44.0    | 77.2 | 7.8 | 31.3   | 3516     | 25202      |
| LICA                   | 10 BS 7     | 22.0     | 64.3     | 44.6    | 66.8 | 7.5 | 31.0   | 3276     | 25159      |
| Pioneer                | 35A34       | 22.7     | 64.2     | 44.4    | 61.9 | 7.8 | 31.1   | 3161     | 25109      |
| LICA                   | 307         | 22.0     | 65.5     | 44.2    | 65.6 | 7.6 | 30.9   | 3246     | 24989      |
| Garst                  | 8693 CB LL  | 21.5     | 66.4     | 43.6    | 66.7 | 7.4 | 31.2   | 3283     | 24744      |
| DEKALB                 | DKC55-12    | 21.1     | 64.8     | 44.5    | 64.1 | 7.4 | 31.8   | 3205     | 23762      |

| Hybrid                 | Brand/<br>Company | Silage            |                 | 30 hour     |             |             | Milk2006      |                     | Milk Yield  |
|------------------------|-------------------|-------------------|-----------------|-------------|-------------|-------------|---------------|---------------------|-------------|
|                        |                   | Yield<br>tons @65 | Moisture<br>%DM | NDF<br>%DM  | dNDF<br>%   | CP<br>%DM   | Starch<br>%DM | Milk/ton<br>lbs/ton |             |
| <b>106 to 110-d RM</b> |                   |                   |                 |             |             |             |               |                     |             |
| Growmark FS            | 6277 XRR          | 24.7              | 64.0            | 45.3        | 63.2        | 7.7         | 29.7          | 3175                | 27462       |
| Pioneer                | 34A89             | 24.1              | 63.1            | 45.5        | 63.6        | 7.5         | 30.1          | 3175                | 26764       |
| Doebler's              | 632 ARR           | 24.1              | 62.2            | 47.3        | 64.3        | 7.5         | 28.9          | 3160                | 26661       |
| Pioneer                | 34A20             | 23.3              | 62.7            | 44.9        | 64.2        | 7.5         | 30.7          | 3210                | 26120       |
| Pioneer                | 33T59             | 22.2              | 63.3            | 43.7        | 65.6        | 7.8         | 30.8          | 3243                | 25157       |
| Pioneer                | 33D14             | 23.1              | 62.9            | 46.8        | 61.7        | 7.7         | 27.9          | 3073                | 24836       |
| Fielders Choice        | 4206 ND           | 21.8              | 65.3            | 45.0        | 64.8        | 8.5         | 29.3          | 3242                | 24769       |
| DEKALB                 | DKC57-47          | 22.3              | 63.7            | 45.2        | 63.3        | 7.5         | 30.2          | 3168                | 24767       |
| Doebler's              | 508 SL            | 22.6              | 64.2            | 47.1        | 63.8        | 7.1         | 27.6          | 3128                | 24736       |
| Fielders Choice        | 4310 ND           | 21.5              | 65.2            | 44.2        | 65.5        | 8.3         | 30.5          | 3284                | 24731       |
| Garst                  | 8381 Ht LL        | 22.5              | 67.3            | 45.8        | 63.5        | 7.6         | 27.3          | 3117                | 24443       |
| Mycogen                | F2F610            | 19.7              | 65.5            | 47.2        | 77.8        | 7.8         | 26.9          | 3454                | 23766       |
| TA Seeds               | TA 570-11         | 20.8              | 61.9            | 45.6        | 65.6        | 7.1         | 30.8          | 3229                | 23474       |
| <b>111 to 115-d RM</b> |                   |                   |                 |             |             |             |               |                     |             |
| TA Seeds               | TA 689-00F        | 27.8              | 63.8            | 49.3        | 61.4        | 7.4         | 25.9          | 3026                | 29394       |
| DEKALB                 | DKC61-66          | 24.5              | 64.1            | 43.8        | 63.9        | 7.9         | 31.4          | 3223                | 27661       |
| DynaGro                | 57P12             | 24.8              | 66.9            | 44.3        | 63.3        | 7.6         | 30.1          | 3174                | 27448       |
| Pioneer                | 33A88             | 24.0              | 66.5            | 44.8        | 62.5        | 7.9         | 28.8          | 3158                | 26544       |
| DEKALB                 | DKC64-23          | 23.5              | 64.1            | 43.3        | 62.0        | 7.7         | 31.3          | 3187                | 26192       |
| Pioneer                | 34B38             | 23.9              | 64.0            | 47.4        | 62.6        | 7.5         | 27.7          | 3091                | 25838       |
| Mycogen                | F2F721            | 20.5              | 69.3            | 46.2        | 76.8        | 8.0         | 26.8          | 3452                | 24777       |
| TA Seeds               | TA 678-13         | 22.1              | 64.6            | 45.1        | 62.7        | 8.0         | 29.6          | 3186                | 24605       |
| LICA                   | 1167 S            | 21.5              | 67.6            | 49.3        | 64.0        | 7.7         | 23.3          | 3013                | 22687       |
| <b>LSD 0.10</b>        |                   | <b>2.13</b>       | <b>1.85</b>     | <b>1.46</b> | <b>2.60</b> | <b>0.31</b> | <b>1.57</b>   | <b>72</b>           | <b>2458</b> |
| Overall Mean           |                   | 22.8              | 63.2            | 44.5        | 65.6        | 7.6         | 31.1          | 3247                | 25855       |



Table 3. Silage yield, milk/ton, and calculated milk yield for corn silage hybrids at Groveland Station, NY in 2007.

| Brand/<br>Company      | Hybrid      | Silage   |          | 30 hour |      |     | Starch | Milk2006 | Milk2006   |
|------------------------|-------------|----------|----------|---------|------|-----|--------|----------|------------|
|                        |             | Yield    | Moisture | NDF     | dNDF | CP  |        | Milk/ton | Milk Yield |
|                        |             | tons @65 | %DM      | %DM     | %    | %DM | %DM    | lbs/ton  | lbs/acre   |
| <b>94 to 100-d RM</b>  |             |          |          |         |      |     |        |          |            |
| Mycogen                | TMF2T497    | 32.5     | 64.1     | 43.7    | 62.1 | 7.5 | 33.0   | 3250     | 36905      |
| DynaGro                | 54T42       | 29.8     | 67.4     | 41.3    | 60.7 | 7.6 | 36.2   | 3282     | 34270      |
| Garst                  | 8679 CRW RR | 29.6     | 68.1     | 41.0    | 59.7 | 7.7 | 36.2   | 3233     | 33589      |
| LICA                   | 946 LRR     | 27.9     | 62.1     | 42.0    | 63.9 | 7.6 | 35.9   | 3323     | 32429      |
| Hyland                 | HL S047     | 28.1     | 64.6     | 43.1    | 62.5 | 8.0 | 33.5   | 3253     | 31983      |
| Garst                  | 8688 GT     | 26.7     | 66.4     | 39.3    | 63.3 | 7.9 | 36.9   | 3380     | 31635      |
| LICA                   | 99 S 7      | 27.3     | 66.6     | 43.2    | 59.8 | 7.9 | 32.6   | 3198     | 30601      |
| TA Seeds               | TA 489-00F  | 27.0     | 66.7     | 42.8    | 61.2 | 8.0 | 33.6   | 3228     | 30463      |
| Growmark FS            | 4955 XRR    | 26.3     | 63.3     | 40.8    | 61.8 | 7.8 | 36.3   | 3313     | 30435      |
| LICA                   | 98 BS 7     | 26.6     | 65.5     | 43.1    | 62.6 | 7.8 | 33.4   | 3250     | 30200      |
| Pioneer                | 38H72       | 26.3     | 63.9     | 41.5    | 60.1 | 7.9 | 35.8   | 3252     | 29948      |
| LICA                   | 964 L       | 26.2     | 65.2     | 43.1    | 59.9 | 8.0 | 33.3   | 3186     | 29189      |
| NK Brand               | N39-Q1      | 25.5     | 64.4     | 40.7    | 59.8 | 7.8 | 36.9   | 3268     | 29104      |
| Pioneer                | 38B87       | 24.5     | 62.7     | 39.9    | 60.1 | 8.0 | 38.2   | 3306     | 28291      |
| Mycogen                | F2F485      | 22.6     | 66.4     | 42.0    | 74.4 | 8.4 | 34.3   | 3539     | 27915      |
| Hyland                 | HL S041     | 22.9     | 65.7     | 41.3    | 63.1 | 8.5 | 34.8   | 3322     | 26632      |
| Hyland                 | HL SR42     | 23.2     | 65.9     | 42.2    | 61.8 | 8.3 | 34.7   | 3243     | 26300      |
| <b>101 to 105-d RM</b> |             |          |          |         |      |     |        |          |            |
| Hyland                 | HL S058     | 31.6     | 66.8     | 42.8    | 57.9 | 7.3 | 34.5   | 3194     | 35333      |
| Hyland                 | HL S067     | 30.8     | 66.9     | 44.3    | 60.0 | 7.7 | 32.9   | 3190     | 34424      |
| Pioneer                | 35F40       | 28.1     | 65.6     | 40.6    | 62.9 | 7.7 | 37.2   | 3305     | 32442      |
| TA Seeds               | TA 557-00F  | 29.3     | 64.6     | 44.3    | 59.8 | 8.1 | 31.5   | 3137     | 32184      |
| Doebler's              | 555 XY      | 27.3     | 66.2     | 39.4    | 62.8 | 7.6 | 37.3   | 3364     | 32163      |
| Pioneer                | 35A34       | 27.8     | 67.0     | 41.4    | 62.2 | 7.8 | 35.5   | 3297     | 31949      |
| DynaGro                | 55P86       | 28.9     | 66.0     | 43.5    | 58.2 | 7.4 | 34.9   | 3142     | 31844      |
| LICA                   | 10 BS 7     | 27.4     | 68.3     | 41.3    | 63.0 | 7.9 | 35.8   | 3322     | 31824      |
| Mycogen                | F2F566      | 25.6     | 70.8     | 42.6    | 75.3 | 8.6 | 32.5   | 3536     | 31644      |
| DEKALB                 | DKC55-12    | 28.0     | 66.2     | 41.2    | 60.2 | 7.5 | 36.7   | 3224     | 31557      |
| Garst                  | 8693 CB LL  | 25.6     | 68.1     | 39.7    | 64.3 | 7.5 | 36.9   | 3390     | 30399      |
| NK Brand               | N48-R3      | 25.6     | 65.2     | 38.7    | 60.1 | 7.9 | 38.5   | 3296     | 29528      |
| DEKALB                 | DKC52-63    | 25.3     | 66.6     | 41.1    | 61.4 | 7.8 | 36.3   | 3291     | 29146      |
| Garst                  | 8571 CB LL  | 25.3     | 67.9     | 41.0    | 60.5 | 7.6 | 36.4   | 3285     | 29077      |
| LICA                   | UFO 1056 B  | 23.1     | 67.7     | 41.1    | 72.3 | 8.1 | 34.4   | 3541     | 28563      |
| LICA                   | 307         | 24.0     | 69.0     | 40.9    | 61.3 | 7.7 | 36.3   | 3293     | 27656      |

| Hybrid                 | Brand/<br>Company | Silage      |             | 30 hour     |             |             | Milk2006    | Milk2006  |             |
|------------------------|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------|-------------|
|                        |                   | Yield       | Moisture    | NDF         | dNDF        | CP          | Starch      | Milk/ton  | Milk Yield  |
|                        |                   | tons @65    | %DM         | %DM         | %           | %DM         | %DM         | lbs/ton   | lbs/acre    |
| <b>106 to 110-d RM</b> |                   |             |             |             |             |             |             |           |             |
| Garst                  | 8381 Ht LL        | 30.6        | 69.0        | 41.9        | 63.4        | 7.6         | 34.5        | 3316      | 35520       |
| Growmark FS            | 6277 XRR          | 30.1        | 68.5        | 42.0        | 58.8        | 7.5         | 35.3        | 3222      | 33993       |
| Doebler's              | 632 ARR           | 30.0        | 69.2        | 43.4        | 60.6        | 7.6         | 33.9        | 3227      | 33857       |
| DEKALB                 | DKC57-47          | 29.9        | 68.1        | 42.2        | 59.5        | 7.6         | 34.9        | 3218      | 33672       |
| Pioneer                | 33D14             | 30.7        | 68.6        | 43.9        | 57.6        | 7.9         | 31.5        | 3101      | 33263       |
| Pioneer                | 33T59             | 29.2        | 68.3        | 41.8        | 59.5        | 8.2         | 33.8        | 3230      | 33008       |
| Mycogen                | F2F610            | 27.5        | 70.5        | 45.2        | 71.1        | 8.1         | 30.3        | 3423      | 32920       |
| Pioneer                | 34A89             | 29.9        | 68.7        | 43.7        | 57.5        | 7.7         | 32.7        | 3133      | 32728       |
| Pioneer                | 34A20             | 28.0        | 69.3        | 42.1        | 58.8        | 8.1         | 34.0        | 3195      | 31249       |
| Doebler's              | 508 SL            | 27.1        | 68.6        | 42.5        | 59.4        | 7.6         | 34.0        | 3209      | 30356       |
| Fielders Choice        | 4206 ND           | 26.2        | 69.5        | 42.4        | 61.0        | 8.5         | 34.8        | 3282      | 30036       |
| TA Seeds               | TA 570-11         | 26.2        | 67.1        | 42.1        | 61.6        | 7.5         | 35.2        | 3274      | 30021       |
| Fielders Choice        | 4310 ND           | 24.6        | 69.9        | 42.5        | 62.9        | 8.6         | 33.7        | 3326      | 28589       |
| <b>111 to 115-d RM</b> |                   |             |             |             |             |             |             |           |             |
| Pioneer                | 34B38             | 32.7        | 69.8        | 42.4        | 60.8        | 7.7         | 34.1        | 3216      | 36825       |
| TA Seeds               | TA 689-00F        | 32.1        | 69.2        | 45.9        | 58.3        | 8.1         | 30.1        | 3063      | 34456       |
| Pioneer                | 33A88             | 30.2        | 69.7        | 42.9        | 58.5        | 7.6         | 32.4        | 3149      | 33323       |
| DEKALB                 | DKC61-66          | 28.0        | 69.6        | 41.9        | 60.1        | 7.9         | 35.0        | 3218      | 31505       |
| TA Seeds               | TA 678-13         | 27.7        | 70.2        | 43.2        | 59.8        | 7.8         | 33.4        | 3202      | 30974       |
| DynaGro                | 57P12             | 27.8        | 70.9        | 42.3        | 58.8        | 7.6         | 33.2        | 3159      | 30728       |
| Mycogen                | F2F721            | 25.2        | 73.2        | 43.5        | 72.2        | 8.1         | 30.9        | 3448      | 30357       |
| DEKALB                 | DKC64-23          | 26.1        | 69.3        | 40.9        | 61.1        | 8.1         | 34.6        | 3265      | 29806       |
| LICA                   | 1167 S            | 26.2        | 72.7        | 48.5        | 59.9        | 8.0         | 26.3        | 3035      | 27764       |
| <b>LSD 0.10</b>        |                   | <b>2.48</b> | <b>1.67</b> | <b>1.37</b> | <b>1.57</b> | <b>0.33</b> | <b>1.62</b> | <b>66</b> | <b>2917</b> |
| Overall Mean           |                   | 27.5        | 67.5        | 42.2        | 61.8        | 7.9         | 34.4        | 3264      | 31356       |

Table 4. Silage yield, milk/ton, and calculated milk yield for corn silage hybrids at Madrid, NY in 2007.

| Madrid NY, 2007      |             |                            |                 |             |                      |             |               |                                 |                                    |
|----------------------|-------------|----------------------------|-----------------|-------------|----------------------|-------------|---------------|---------------------------------|------------------------------------|
| Brand/<br>Company    | Hybrid      | Silage<br>Yield<br>tons_65 | Moisture<br>%DM | NDF<br>%DM  | 30 hour<br>dNDF<br>% | CP<br>%DM   | Starch<br>%DM | Milk2006<br>Milk/ton<br>lbs/ton | Milk2006<br>Milk Yield<br>lbs/acre |
| <b>74 to 85-d RM</b> |             |                            |                 |             |                      |             |               |                                 |                                    |
| TA Seeds             | TA 240-11   | 34.2                       | 54.8            | 42.4        | 55.5                 | 7.9         | 36.1          | 3182                            | 38147                              |
| Hyland               | HL S011     | 33.8                       | 60.6            | 46.6        | 57.7                 | 8.5         | 30.0          | 3120                            | 36861                              |
| Doebler's            | 377 BWR     | 31.4                       | 62.5            | 42.2        | 58.7                 | 7.9         | 34.9          | 3251                            | 35721                              |
| Hyland               | HL SR22     | 25.7                       | 60.2            | 45.7        | 57.7                 | 8.7         | 30.2          | 3108                            | 27929                              |
| Doebler's            | 286 XRR     | 22.4                       | 64.0            | 44.5        | 56.7                 | 8.5         | 30.7          | 3150                            | 24674                              |
| Garst                | 8986 YG1/RR | 16.8                       | 62.8            | 44.0        | 55.4                 | 8.5         | 31.4          | 3107                            | 18250                              |
| <b>86 to 90-d RM</b> |             |                            |                 |             |                      |             |               |                                 |                                    |
| Hyland               | HL S034     | 32.3                       | 62.7            | 44.6        | 58.7                 | 8.0         | 32.3          | 3172                            | 35818                              |
| Pioneer              | 38N87       | 32.0                       | 60.2            | 42.6        | 55.9                 | 8.1         | 33.9          | 3168                            | 35361                              |
| TA Seeds             | TA 270-11   | 30.2                       | 54.4            | 44.8        | 57.2                 | 7.6         | 34.2          | 3144                            | 33191                              |
| Hyland               | HL SR35     | 30.4                       | 63.0            | 46.3        | 59.4                 | 7.9         | 30.7          | 3100                            | 32950                              |
| Garst                | 8866 RR     | 29.4                       | 59.4            | 45.8        | 55.5                 | 7.5         | 32.5          | 3051                            | 31346                              |
| Mycogen              | TMF2Q296    | 23.7                       | 64.1            | 43.1        | 57.0                 | 8.7         | 31.2          | 3140                            | 26080                              |
| DynaGro              | 52P81       | 18.0                       | 64.8            | 41.9        | 58.7                 | 8.4         | 33.7          | 3258                            | 20555                              |
| <b>91 to 95-d RM</b> |             |                            |                 |             |                      |             |               |                                 |                                    |
| Mycogen              | TMF2N422    | 33.1                       | 63.1            | 44.7        | 61.7                 | 7.5         | 33.2          | 3263                            | 37796                              |
| Growmark FS          | EX 2604     | 31.2                       | 63.2            | 40.8        | 59.4                 | 7.5         | 37.5          | 3313                            | 36114                              |
| Pioneer              | 38K87       | 31.9                       | 60.2            | 41.9        | 56.4                 | 7.8         | 35.6          | 3229                            | 36056                              |
| TA Seeds             | TA 310-02F  | 32.6                       | 61.8            | 45.6        | 58.1                 | 8.2         | 30.9          | 3156                            | 35966                              |
| DynaGro              | 53K69       | 29.8                       | 62.4            | 42.8        | 58.5                 | 7.7         | 35.3          | 3210                            | 33525                              |
| DEKALB               | DKC45-82    | 29.8                       | 65.2            | 43.3        | 55.4                 | 7.8         | 33.3          | 3116                            | 32503                              |
| LICA                 | 946 L RR    | 28.4                       | 61.6            | 46.2        | 60.2                 | 7.4         | 31.5          | 3182                            | 31635                              |
| Mycogen              | TMF2L416    | 28.2                       | 60.9            | 44.8        | 58.9                 | 8.1         | 32.1          | 3164                            | 31172                              |
| NK Brand             | N29-A2      | 27.3                       | 55.5            | 42.1        | 57.1                 | 7.9         | 37.0          | 3242                            | 30967                              |
| Hyland               | HL S041     | 25.9                       | 64.2            | 42.5        | 61.2                 | 8.2         | 33.5          | 3275                            | 29668                              |
| NK Brand             | N27-B5      | 26.6                       | 55.9            | 43.1        | 56.8                 | 7.8         | 35.1          | 3193                            | 29659                              |
| Hyland               | HL SR42     | 25.7                       | 65.2            | 41.8        | 60.3                 | 8.3         | 34.2          | 3276                            | 29431                              |
| Fielders Choice      | 4095 ND     | 26.0                       | 60.0            | 45.7        | 57.6                 | 8.4         | 31.6          | 3145                            | 28538                              |
| TA Seeds             | TA 451-11   | 25.1                       | 57.6            | 43.0        | 55.1                 | 7.6         | 35.7          | 3138                            | 27532                              |
| DynaGro              | 53B04       | 24.1                       | 64.1            | 41.8        | 59.0                 | 8.0         | 35.4          | 3264                            | 27421                              |
| Chemgro              | 5434 RR     | 25.5                       | 61.4            | 47.0        | 56.6                 | 8.6         | 28.5          | 3041                            | 27134                              |
| Growmark FS          | 4453 XRR    | 22.4                       | 62.8            | 42.2        | 56.6                 | 8.0         | 35.2          | 3217                            | 25161                              |
| DEKALB               | DKC41-57    | 20.8                       | 64.8            | 41.6        | 57.7                 | 8.4         | 34.4          | 3235                            | 23486                              |
| <b>96 to 99-d RM</b> |             |                            |                 |             |                      |             |               |                                 |                                    |
| DEKALB               | DKC50-48    | 31.4                       | 66.2            | 41.1        | 59.1                 | 7.6         | 36.0          | 3292                            | 36179                              |
| LICA                 | 99 S7       | 32.2                       | 63.2            | 44.4        | 59.0                 | 7.8         | 31.9          | 3192                            | 36080                              |
| LICA                 | 98 BS7      | 31.0                       | 63.7            | 43.3        | 62.9                 | 7.9         | 33.1          | 3324                            | 36065                              |
| LICA                 | 964 L       | 31.8                       | 61.5            | 46.5        | 56.5                 | 8.0         | 30.7          | 3038                            | 33922                              |
| LICA                 | UFO 996 B   | 22.2                       | 62.8            | 43.0        | 73.1                 | 8.3         | 33.5          | 3556                            | 27732                              |
| TA Seeds             | TA 465-13   | 22.4                       | 59.3            | 46.0        | 55.5                 | 8.0         | 31.4          | 3054                            | 23861                              |
| <b>LSD 0.10</b>      |             | <b>3.20</b>                | <b>2.55</b>     | <b>2.03</b> | <b>1.31</b>          | <b>0.43</b> | <b>1.84</b>   | <b>94</b>                       | <b>3947</b>                        |
| Overall Mean         |             | 27.7                       | 61.6            | 43.8        | 58.3                 | 8.0         | 33.2          | 3191                            | 30932                              |

Table 5. Silage yield, milk/ton, and calculated milk yield for corn silage hybrids at Chazy, NY in 2007.

| Chazy NY, 2007       |             |                            |                 |             |                      |             |               |                                 |                                    |
|----------------------|-------------|----------------------------|-----------------|-------------|----------------------|-------------|---------------|---------------------------------|------------------------------------|
| Brand/<br>Company    | Hybrid      | Silage<br>Yield<br>tons_65 | Moisture<br>%DM | NDF<br>%DM  | 30 hour<br>dNDF<br>% | CP<br>%DM   | Starch<br>%DM | Milk2006<br>Milk/ton<br>lbs/ton | Milk2006<br>Milk Yield<br>lbs/acre |
| <b>74 to 85-d RM</b> |             |                            |                 |             |                      |             |               |                                 |                                    |
| Doebler's            | 286 XRR     | 25.0                       | 68.5            | 43.5        | 57.1                 | 8.5         | 32.1          | 3256                            | 28527                              |
| Doebler's            | 377 BWR     | 24.1                       | 69.6            | 41.6        | 60.7                 | 8.0         | 35.5          | 3367                            | 28417                              |
| Hyland               | HL S011     | 24.9                       | 65.6            | 44.8        | 57.2                 | 8.3         | 31.2          | 3208                            | 27923                              |
| TA Seeds             | TA 240-11   | 22.4                       | 64.9            | 41.5        | 57.1                 | 7.3         | 37.3          | 3312                            | 25943                              |
| Garst                | 8986 YG1/RR | 21.3                       | 68.1            | 41.6        | 57.5                 | 8.1         | 35.4          | 3319                            | 24733                              |
| Hyland               | HL SR22     | 20.9                       | 67.6            | 43.2        | 58.7                 | 8.4         | 32.7          | 3279                            | 24038                              |
| <b>86 to 90-d RM</b> |             |                            |                 |             |                      |             |               |                                 |                                    |
| Hyland               | HL SR35     | 27.4                       | 69.4            | 44.4        | 58.5                 | 8.0         | 31.6          | 3232                            | 30946                              |
| Hyland               | HL S034     | 27.3                       | 68.6            | 45.8        | 58.5                 | 7.4         | 31.3          | 3221                            | 30775                              |
| Pioneer              | 38N87       | 25.7                       | 66.7            | 41.0        | 55.7                 | 7.8         | 36.0          | 3283                            | 29508                              |
| Garst                | 8866 RR     | 25.8                       | 68.3            | 43.7        | 57.1                 | 7.4         | 34.0          | 3254                            | 29355                              |
| DynaGro              | 52P81       | 24.7                       | 66.8            | 40.8        | 59.4                 | 7.8         | 36.9          | 3385                            | 29274                              |
| TA Seeds             | TA 270-11   | 23.0                       | 67.3            | 42.6        | 57.3                 | 7.4         | 35.1          | 3306                            | 26641                              |
| Mycogen              | TMF2Q296    | 22.3                       | 67.5            | 41.4        | 57.9                 | 8.2         | 35.0          | 3301                            | 25838                              |
| <b>91 to 95-d RM</b> |             |                            |                 |             |                      |             |               |                                 |                                    |
| Mycogen              | TMF2N422    | 28.7                       | 69.4            | 44.2        | 62.4                 | 7.4         | 33.2          | 3380                            | 34017                              |
| TA Seeds             | TA 310-02F  | 27.9                       | 68.9            | 45.7        | 60.2                 | 7.7         | 30.8          | 3246                            | 31761                              |
| LICA                 | 946 L RR    | 26.9                       | 70.0            | 45.8        | 62.8                 | 7.5         | 31.6          | 3347                            | 31495                              |
| Pioneer              | 38K87       | 27.3                       | 68.3            | 42.4        | 57.1                 | 7.6         | 34.1          | 3255                            | 31117                              |
| Mycogen              | TMF2L416    | 26.0                       | 69.9            | 44.0        | 60.3                 | 7.8         | 32.6          | 3310                            | 30151                              |
| DynaGro              | 53K69       | 24.8                       | 69.2            | 42.0        | 58.4                 | 7.2         | 35.9          | 3312                            | 28752                              |
| DynaGro              | 53B04       | 24.6                       | 69.2            | 41.8        | 59.2                 | 7.6         | 35.6          | 3330                            | 28676                              |
| NK Brand             | N27-B5      | 24.4                       | 69.0            | 41.7        | 57.6                 | 7.7         | 35.6          | 3323                            | 28367                              |
| DEKALB               | DKC41-57    | 24.4                       | 67.9            | 41.3        | 56.6                 | 7.8         | 36.5          | 3292                            | 28148                              |
| Growmark FS          | EX 2604     | 23.7                       | 69.5            | 42.5        | 57.5                 | 7.2         | 35.4          | 3274                            | 27165                              |
| NK Brand             | N29-A2      | 23.1                       | 68.7            | 41.3        | 58.6                 | 7.8         | 36.1          | 3352                            | 27113                              |
| Growmark FS          | 4453 XRR    | 23.7                       | 69.1            | 44.1        | 58.4                 | 7.7         | 32.4          | 3260                            | 27045                              |
| DEKALB               | DKC45-82    | 23.7                       | 70.2            | 42.0        | 56.3                 | 7.9         | 33.9          | 3231                            | 26869                              |
| TA Seeds             | TA 451-11   | 23.1                       | 69.3            | 41.1        | 56.5                 | 7.8         | 35.4          | 3278                            | 26502                              |
| Hyland               | HL SR42     | 21.3                       | 71.3            | 41.3        | 61.4                 | 8.4         | 33.5          | 3359                            | 25049                              |
| Hyland               | HL S041     | 20.7                       | 70.9            | 42.3        | 61.0                 | 8.3         | 33.5          | 3367                            | 24391                              |
| Chemgro              | 5434 RR     | 21.2                       | 68.7            | 45.1        | 58.8                 | 8.0         | 31.3          | 3234                            | 23958                              |
| Fielders Choice      | 4095 ND     | 17.5                       | 70.8            | 43.5        | 59.1                 | 8.6         | 32.0          | 3320                            | 20247                              |
| <b>96 to 99-d RM</b> |             |                            |                 |             |                      |             |               |                                 |                                    |
| LICA                 | 964 L       | 27.1                       | 69.4            | 44.7        | 60.8                 | 7.9         | 31.6          | 3301                            | 31319                              |
| DEKALB               | DKC50-48    | 25.7                       | 70.3            | 42.7        | 58.9                 | 7.5         | 34.3          | 3297                            | 29595                              |
| LICA                 | 99 S7       | 25.2                       | 70.8            | 45.2        | 59.0                 | 7.9         | 29.5          | 3227                            | 28483                              |
| LICA                 | 98 BS7      | 24.2                       | 71.9            | 44.6        | 61.7                 | 7.9         | 30.5          | 3322                            | 28074                              |
| TA Seeds             | TA 465-13   | 24.0                       | 68.5            | 44.5        | 56.2                 | 7.8         | 32.2          | 3182                            | 26745                              |
| LICA                 | UFO 996 B   | 20.2                       | 72.3            | 40.9        | 74.1                 | 8.1         | 34.8          | 3691                            | 26118                              |
| <b>LSD 0.10</b>      |             | <b>2.15</b>                | <b>1.28</b>     | <b>1.11</b> | <b>1.72</b>          | <b>0.30</b> | <b>1.49</b>   | <b>68</b>                       | <b>2638</b>                        |
| Overall Mean         |             | 24.2                       | 69.0            | 43.0        | 59.1                 | 7.8         | 33.7          | 3303                            | 27921                              |

