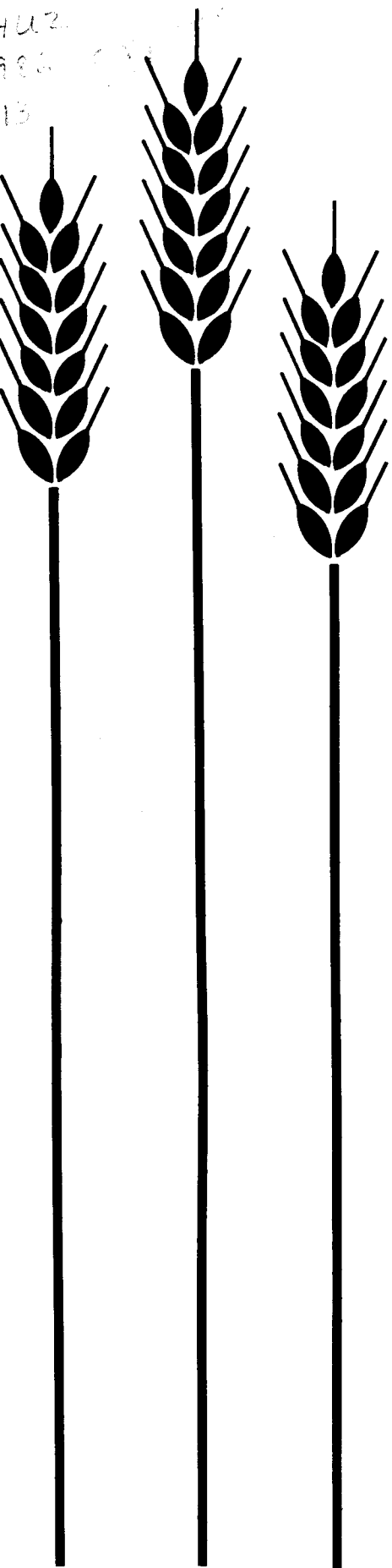


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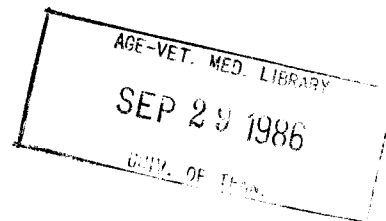


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# ***Performance of Wheat, Barley, Oats and Rye Varieties in 1986***

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# PERFORMANCE OF WHEAT, BARLEY, OATS AND RYE VARIETIES IN 1986<sup>1/</sup>

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## Wheat

Thirty-two soft red winter wheat varieties were evaluated at eight locations in 1986. No data were reported for Springfield, Crossville and Greeneville in 1984 or for Crossville in 1985 due to conditions that made the data too variable to be reliable.

The winter of 1985-86 had warm days and cold nights with little or no snow cover resulting in winter killing of wheat, oats and barley at many locations. Winter kill was severe at Crossville with no small grain variety performing well.

Small grain yields were further reduced, especially at Knoxville and Greeneville, by the dry spring of 1986.

With the dry spring of 1986 very little disease was noted at any location. Little or no response to foliar fungicide treatment on wheat varieties was obtained at Knoxville, Spring Hill and Jackson in 1986. These results will be reported in another publication.

Coker 762, Terral 817, Terral 812 and Coker 9227 did not perform well at most locations. Terral 812 seed were weak, resulting in thin stands at most locations. Florida 302 had performed well in 1984 and 1985, with little or no winter kill; however, in 1986 it showed winter killing at several locations with reduced yields. Coker 747 performed better relative to other varieties in 1986 than it had in previous years.

In 1986 the leading cultivars in yield of wheat were HW 3021, HW 3015, Coker 747, Saluda, Pioneer brand 2550 and Becker. Coker 916, Coker 983, and Magnum did

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<sup>1/</sup>These results will be included in the 1986 Bulletin, Performance of Field Crop Varieties, which will be available in 1987.

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not perform as well in 1986 as they had in 1984 and 1985. Using the three-year average, the leading varieties were Coker 916, Caldwell, Scotty, Compton, and Pioneer brand 2250.

The recommended wheat varieties for 1986-87 are Auburn, Caldwell, Coker 747, Coker 916, Fillmore, Massey, Pioneer brand 2550, Scotty and Tyler.

### Barley

Nine barley cultivars were evaluated at six locations in 1986. No yield data are reported for Greeneville because of winter killing and poor stands for all varieties.

Wysor and Henry were the two leading varieties in average yield. Yields at Knoxville, Crossville and Springfield were erratic for most varieties due to winter killing. The injury was not uniform across all replications, resulting in high C.V.'s for these locations. Spring Hill and Jackson data were averaged because of their low C.V.'s; however, the varieties ranked the same for this average yield as when the locations with high C.V.'s were included in the state average. These types of data can be expected in years where a lot of winter killing occurs.

The recommended barley varieties for 1986-87 are Volbar and Henry.

### Fall Seeded Oats

All fall seeded winter oats winter-killed in 1984. In 1985 some winter killing occurred but snow cover during severe cold reduced injury. In 1986 Jackson was the only location where little winter killing occurred. No yields were reported for Greeneville due to severe winter killing for all varieties.

Madison variety winter-killed at all locations with yields being recorded at Jackson only. The two leading varieties, Cumberland and Coker 716, suffered

winter injury at most locations.

The recommended fall seeded oats for 1986-87 are Southern States 76-30, Coker 716 and Cumberland.

### Spring Oats

Thirteen spring oat varieties were evaluated for grain and forage at Knoxville in 1986. Don, Ogle, Larry and Noble were the leading varieties in grain yield. Forage and grain yield for most varieties were reduced by the extremely dry spring and early summer at this location.

### Rye

Several varieties or strains were evaluated in 1986 at Knoxville for Gurley's Seed Company and Samuel Roberts Noble Foundation, Inc. The leading varieties in grain yield were AFC 20-20, GI 85, N.F. 142, and GI 87x. Considering the growing season of 1985-86, the rye varieties performed well. Most varieties lodged severely with GI 87 lodging the least. Test weight (weight per bu) was very similar for most varieties.

Table 1. Wheat: Yield of soft red winter wheat varieties evaluated at eight locations in 1986.

| Variety               | Avg. | Greene-1/<br>ville | Knox-2/<br>ville | Spring-3/<br>field | Spring-4/<br>Hill | Jackson-5/<br>Jackson | Milan-6/<br>Milan | Cross-7/<br>ville | Martin-8/<br>Martin |
|-----------------------|------|--------------------|------------------|--------------------|-------------------|-----------------------|-------------------|-------------------|---------------------|
| Bushels per acre      |      |                    |                  |                    |                   |                       |                   |                   |                     |
| HW 3021               | 37   | 53                 | 28               | 37                 | 32                | 39                    | 52                | 11                | 45                  |
| HW 3015               | 36   | 52                 | 28               | 32                 | 36                | 36                    | 51                | 10                | 42                  |
| Coker 747             | 35   | 50                 | 30               | 34                 | 28                | 39                    | 43                | 16                | 36                  |
| Saluda                | 34   | 53                 | 25               | 31                 | 32                | 43                    | 45                | 7                 | 39                  |
| Pioneer<br>brand 2550 | 34   | 48                 | 28               | 27                 | 32                | 40                    | 48                | 12                | 39                  |
| Becker                | 34   | 39                 | 21               | 27                 | 33                | 41                    | 53                | 10                | 49                  |
| Fillmore              | 33   | 44                 | 34               | 26                 | 33                | 35                    | 36                | 18                | 40                  |
| Tyler                 | 32   | 47                 | 22               | 31                 | 29                | 39                    | 44                | 6                 | 37                  |
| Pioneer<br>brand 2551 | 32   | 37                 | 25               | 21                 | 35                | 39                    | 44                | 15                | 44                  |
| T79-307               | 31   | 45                 | 22               | 32                 | 30                | 25                    | 42                | 17                | 37                  |
| Scotty                | 31   | 50                 | 24               | 28                 | 23                | 35                    | 37                | 16                | 34                  |
| Auburn                | 31   | 36                 | 26               | 21                 | 24                | 42                    | 35                | 25                | 42                  |
| Garst Exp<br>4055     | 31   | 42                 | 22               | 24                 | 28                | 39                    | 36                | 15                | 40                  |
| Caldwell              | 31   | 44                 | 28               | 27                 | 29                | 32                    | 34                | 12                | 44                  |
| Coker 9323            | 30   | 43                 | 23               | 32                 | 25                | 40                    | 31                | 14                | 30                  |
| Massey                | 30   | 45                 | 16               | 29                 | 26                | 34                    | 43                | 9                 | 36                  |
| Compton               | 30   | 44                 | 32               | 17                 | 28                | 33                    | 34                | 10                | 41                  |
| Coker 916             | 29   | 45                 | 18               | 32                 | 30                | 34                    | 43                | 4                 | 29                  |
| HW 3027               | 29   | 47                 | 19               | 31                 | 25                | 32                    | 42                | 6                 | 32                  |
| T80-312               | 29   | 41                 | 20               | 31                 | 26                | 26                    | 37                | 19                | 33                  |
| Magnum                | 28   | 42                 | 26               | 31                 | 27                | 24                    | 31                | 16                | 26                  |
| HW 3022               | 28   | 37                 | 18               | 27                 | 23                | 38                    | 42                | 2                 | 33                  |
| Twain <sup>10/</sup>  | 28   | 42                 | 15               | 28                 | 28                | 32                    | 37                | 6                 | 35                  |
| Newton                | 27   | 35                 | 19               | 20                 | 20                | 37                    | 33                | 21                | 32                  |
| AKS (N-80)            | 26   | 45                 | 10               | 27                 | 26                | 22                    | 32                | 6                 | 37                  |
| Florida 302           | 25   | 37                 | 5                | 25                 | 20                | 41                    | 40                | 5                 | --9/                |
| Coker 983             | 24   | 37                 | 16               | 28                 | 19                | 36                    | 34                | 3                 | 21                  |
| Blazer                | 24   | 37                 | 15               | 24                 | 19                | 23                    | 32                | 7                 | 32                  |
| Coker 762             | 27   | 46                 | 9                | 30                 | --9/              | 43                    | 27                | 7                 | --9/                |
| Terral 817            | 20   | 34                 | 10               | 24                 | --9/              | 28                    | 25                | 3                 | --9/                |
| Terral 812            | 19   | 33                 | 2                | 22                 | --9/              | 34                    | 17                | 4                 | --9/                |
| Coker 9227            | 13   | 12                 | 3                | 12                 | --9/              | 16                    | 33                | 4                 | --9/                |
| Bailey 4287           |      |                    | 14               |                    |                   |                       |                   |                   |                     |
| L.S.D. (.05)          |      | 9.7                | 6.1              | 6.3                | 5.4               | 5.2                   | 7.5               | 4.1               |                     |
| C.V. %                |      | 16.4               | 22.0             | 16.7               | 14.1              | 10.8                  | 14.1              | 27.8              |                     |
| Avg.                  |      | 41.9               | 19.8             | 27.1               | 27.3              | 34.4                  | 37.9              | 10.6              |                     |

1/Waynesboro silt loam (2% to 5% slopes).

2/Decatur silt loam (2% to 5% slopes).

3/Dickson silt loam (2% to 5% slopes).

4/Maury silt loam (2% to 5% slopes).

5/Calloway silt loam (2% to 5% slopes).

6/Memphis silt loam (2% to 5% slopes).

7/Hartsell's loam (2% to 5% slopes).

8/Falaya silt loam (2% to 5% slopes).

9/No yield reported because of disease, poor germination or weed problems.

10/Tested as Agri Pro 78-044-111.

Table 2. Wheat: Yield and other characteristics of soft red winter wheat varieties evaluated at eight locations in 1986.

| Variety                  | Yield<br>bu/A | Date<br>Headed | Date<br>Mature | Plant<br>Height<br>in. | Lodging<br>% | Test <sup>1/</sup><br>Weight<br>lb/bu | Leaf <sup>2/</sup><br>Rust<br>Rating<br>(0-5) | Mildew <sup>2/</sup><br>Rating<br>(0-5) | Stand <sup>3/</sup><br>Rating<br>(0-10) |
|--------------------------|---------------|----------------|----------------|------------------------|--------------|---------------------------------------|-----------------------------------------------|-----------------------------------------|-----------------------------------------|
| HW 3021                  | 37            | 4-29           | 6-2            | 32                     | 0.7          | 57.0                                  | 1.8                                           | 1.0                                     | 3.2                                     |
| HW 3015                  | 36            | 4-28           | 6-2            | 33                     | 1.8          | 55.4                                  | 0.1                                           | 0.3                                     | 3.8                                     |
| Coker 747                | 35            | 4-28           | 6-1            | 28                     | 0.7          | 58.4                                  | 0.9                                           | 1.2                                     | 5.2                                     |
| Saluda                   | 34            | 4-28           | 6-1            | 28                     | 0.6          | 57.4                                  | 0.2                                           | 0.8                                     | 3.2                                     |
| Pioneer<br>brand 2550    | 34            | 4-30           | 6-3            | 31                     | 1.4          | 56.4                                  | 0.1                                           | 1.2                                     | 3.0                                     |
| Becker                   | 34            | 5-1            | 6-2            | 28                     | 0.7          | 56.2                                  | 0.7                                           | 3.6                                     | 3.2                                     |
| Fillmore                 | 33            | 5-4            | 6-7            | 34                     | 1.0          | 51.8                                  | 0.0                                           | 0.3                                     | 5.5                                     |
| Tyler                    | 32            | 5-1            | 6-5            | 32                     | 1.6          | 53.8                                  | 4.7                                           | 1.5                                     | 1.8                                     |
| Pioneer<br>brand 2551    | 32            | 4-30           | 6-1            | 29                     | 0.8          | 55.9                                  | 0.5                                           | 0.4                                     | 7.2                                     |
| T79-307                  | 31            | 4-28           | 6-1            | 33                     | 2.4          | 54.8                                  | 1.8                                           | 1.4                                     | 5.8                                     |
| Scotty                   | 31            | 4-28           | 6-2            | 31                     | 1.1          | 54.9                                  | 0.1                                           | 1.2                                     | 7.2                                     |
| Auburn                   | 31            | 5-4            | 6-6            | 30                     | 0.6          | 54.9                                  | 0.0                                           | 1.0                                     | 8.0                                     |
| Garst Exp<br>4055        | 31            | 4-28           | 6-2            | 31                     | 1.3          | 56.6                                  | 0.1                                           | 1.2                                     | 6.8                                     |
| Caldwell                 | 31            | 4-28           | 6-1            | 32                     | 2.4          | 53.1                                  | 0.0                                           | 1.1                                     | 4.2                                     |
| Coker 9323               | 30            | 4-28           | 6-2            | 27                     | 0.7          | 54.6                                  | 0.4                                           | 0.2                                     | 6.5                                     |
| Massey                   | 30            | 4-28           | 6-2            | 31                     | 1.7          | 55.3                                  | 4.3                                           | 0.1                                     | 3.0                                     |
| Compton                  | 30            | 4-29           | 6-1            | 30                     | 1.1          | 54.7                                  | 0.0                                           | 0.9                                     | 6.0                                     |
| Coker 916                | 29            | 4-27           | 5-31           | 28                     | 2.2          | 56.1                                  | 0.1                                           | 0.6                                     | 1.0                                     |
| HW 3027                  | 29            | 4-27           | 5-31           | 29                     | 1.0          | 55.2                                  | 0.3                                           | 0.9                                     | 2.0                                     |
| T80-312                  | 29            | 4-28           | 6-2            | 33                     | 1.4          | 54.4                                  | 3.5                                           | 1.5                                     | 6.2                                     |
| Magnum                   | 28            | 4-27           | 5-31           | 28                     | 0.7          | 54.1                                  | 0.7                                           | 1.5                                     | 5.0                                     |
| HW 3022                  | 28            | 4-29           | 6-3            | 31                     | 0.7          | 55.2                                  | 1.0                                           | 1.6                                     | 1.8                                     |
| Twain                    | 28            | 4-29           | 6-2            | 32                     | 1.4          | 56.8                                  | 0.0                                           | 0.1                                     | 2.8                                     |
| Newton                   | 27            | 5-2            | 6-2            | 29                     | 0.6          | 54.3                                  | 0.5                                           | 2.0                                     | 8.8                                     |
| AKS (N-80)               | 26            | 4-27           | 5-30           | 30                     | 1.1          | 50.3                                  | 0.0                                           | 1.2                                     | 2.0                                     |
| Florida 302              | 25            | 5-1            | 6-5            | 28                     | 1.3          | 55.4                                  | 0.0                                           | 0.1                                     | 0.8                                     |
| Coker 983                | 24            | 4-29           | 6-3            | 26                     | 0.4          | 55.4                                  | 0.4                                           | 0.1                                     | 0.1                                     |
| Blazer                   | 24            | 4-28           | 5-31           | 30                     | 1.6          | 54.8                                  | 1.5                                           | 1.6                                     | 2.5                                     |
| Coker 762 <sup>4/</sup>  | 27            | 4-30           | 6-5            | 25                     | 1.8          | 55.6                                  | 0.1                                           | 0.9                                     | 3.8                                     |
| Terral 817 <sup>4/</sup> | 20            | 4-27           | 6-2            | 28                     | 3.0          | 54.7                                  | 0.0                                           | 0.9                                     | 1.2                                     |
| Terral 812 <sup>4/</sup> | 19            | 4-28           | 6-6            | 26                     | 2.2          | 55.6                                  | 0.2                                           | 0.8                                     | 0.4                                     |
| Coker 9227 <sup>4/</sup> | 13            | 4-28           | 6-4            | 26                     | 0.8          | 49.1                                  | 0.1                                           | -                                       | 0.1                                     |

<sup>1/</sup>Test weight for Jackson only.

<sup>2/</sup>Rating based on a scale of 0 to 5 with 0 being no disease and 5 being severe.

<sup>3/</sup>A stand rating of 0 to 10 at Crossville with 0 being no stand or survival and 10 being 100 percent stand or survival.

<sup>4/</sup>Average of six locations instead of eight.

Table 3. Wheat: Yield of soft red winter wheat varieties evaluated at six locations for two years (1984-85).

| Variety               | Avg. | Greene-<br>ville | Knox-<br>ville | Spring<br>Hill | Spring-<br>field | Jackson | Milan |
|-----------------------|------|------------------|----------------|----------------|------------------|---------|-------|
| Bushels per acre      |      |                  |                |                |                  |         |       |
| HW 3015               | 46   | 58               | 35             | 42             | 45               | 50      | 48    |
| Saluda                | 45   | 63               | 38             | 38             | 37               | 51      | 43    |
| Coker 916             | 43   | 61               | 28             | 38             | 39               | 44      | 49    |
| HW 3021               | 43   | 54               | 34             | 38             | 45               | 43      | 41    |
| Pioneer<br>brand 2550 | 41   | 56               | 33             | 38             | 39               | 43      | 36    |
| Scotty                | 41   | 61               | 32             | 33             | 37               | 46      | 37    |
| Coker 747             | 40   | 54               | 33             | 33             | 37               | 41      | 43    |
| Florida 302           | 40   | 51               | 24             | 37             | 38               | 49      | 38    |
| Massey                | 38   | 52               | 26             | 34             | 39               | 41      | 37    |
| Magnum                | 38   | 56               | 29             | 34             | 36               | 40      | 35    |
| Caldwell              | 38   | 51               | 34             | 36             | 37               | 40      | 32    |
| Tyler                 | 38   | 55               | 29             | 35             | 43               | 35      | 32    |
| Coker 983             | 38   | 51               | 28             | 33             | 38               | 45      | 34    |
| Compton               | 38   | 52               | 33             | 34             | 30               | 45      | 35    |
| Fillmore              | 37   | 48               | 36             | 36             | 36               | 40      | 27    |
| Auburn                | 36   | 50               | 30             | 29             | 33               | 44      | 33    |
| Blazer                | 32   | 50               | 22             | 28             | 31               | 30      | 28    |

Table 4. Wheat: Yield and other characteristics of soft red winter wheat varieties evaluated at six locations for two years (1984-85).

| Variety               | Yield | Date<br>Headed | Date<br>Mature | Plant<br>Height | Lodging | Test<br>Weight | Rust<br>Rating | Leaf<br>Mildew<br>Rating |
|-----------------------|-------|----------------|----------------|-----------------|---------|----------------|----------------|--------------------------|
|                       | bu/A  |                |                | in.             | %       | lb/bu          | (0-5)          | (0-5)                    |
| HW 3015               | 46    | 4-28           | 6-1            | 35              | 17      | 55.8           | 0.7            | 1.9                      |
| Saluda                | 45    | 4-28           | 6-1            | 30              | 28      | 57.3           | 0.6            | 0.0                      |
| Coker 916             | 43    | 4-26           | 5-30           | 30              | 12      | 56.1           | 0.2            | 1.0                      |
| HW 3021               | 43    | 4-28           | 6-1            | 35              | 16      | 55.2           | 2.2            | 1.3                      |
| Pioneer<br>brand 2550 | 41    | 4-30           | 6-3            | 32              | 25      | 56.1           | 0.9            | 1.1                      |
| Scotty                | 41    | 4-28           | 6-1            | 32              | 12      | 55.8           | 0.2            | 0.7                      |
| Coker 747             | 40    | 4-28           | 5-31           | 30              | 26      | 57.4           | 1.8            | 2.2                      |
| Florida 302           | 40    | 4-30           | 6-4            | 32              | 21      | 54.9           | 0.0            | 0.0                      |
| Massey                | 38    | 4-27           | 6-1            | 33              | 18      | 55.4           | 2.2            | 0.4                      |
| Magnum                | 38    | 4-27           | 5-30           | 30              | 11      | 56.2           | 0.8            | 1.4                      |
| Caldwell              | 38    | 4-28           | 6-1            | 33              | 23      | 54.8           | 0.5            | 0.7                      |
| Tyler                 | 38    | 5-1            | 6-3            | 35              | 21      | 53.7           | 4.0            | 0.8                      |
| Coker 983             | 38    | 4-28           | 6-2            | 29              | 8       | 57.2           | 0.3            | 0.2                      |
| Compton               | 38    | 5-1            | 6-1            | 32              | 25      | 56.8           | 0.0            | 1.4                      |
| Fillmore              | 37    | 5-5            | 6-5            | 37              | 21      | 53.2           | 0.5            | 0.4                      |
| Auburn                | 36    | 5-4            | 6-4            | 33              | 10      | 55.7           | 0.0            | 1.2                      |
| Blazer                | 32    | 4-29           | 5-30           | 33              | 20      | 55.6           | 1.0            | 1.3                      |

Table 5. Wheat: Yield of soft red winter wheat varieties evaluated at five locations for three years (1984-86).

| Variety               | Avg. | Knoxville | Spring<br>Hill | Jackson | Milan | Martin |
|-----------------------|------|-----------|----------------|---------|-------|--------|
| Bushels per acre      |      |           |                |         |       |        |
| Coker 916             | 47   | 44        | 54             | 44      | 53    | 41     |
| Caldwell              | 46   | 45        | 51             | 45      | 42    | 46     |
| Scotty                | 45   | 45        | 43             | 48      | 43    | 47     |
| Compton               | 45   | 43        | 45             | 49      | 42    | 46     |
| Pioneer<br>brand 2550 | 45   | 44        | 50             | 46      | 42    | 42     |
| Auburn                | 44   | 42        | 46             | 47      | 41    | 45     |
| Massey                | 44   | 42        | 48             | 43      | 46    | 43     |
| Magnum                | 43   | 43        | 46             | 43      | 42    | 43     |
| Fillmore              | 43   | 45        | 47             | 44      | 38    | 41     |
| Coker 983             | 43   | 44        | 47             | 45      | 43    | 37     |
| Coker 747             | 43   | 42        | 43             | 45      | 48    | 37     |
| Tyler                 | --   | 44        | 52             | 43      | 44    | --1/   |
| Florida 302           | --   | 40        | 50             | 52      | 45    | --1/   |

1/No data for 1984.

Table 6. Wheat: Yield and other characteristics of soft red winter wheat varieties evaluated at five locations for three years (1984-86).

| Variety               | Yield<br>bu/A | Date<br>Headed | Date<br>Mature | Plant<br>Height<br>in. | Lodging<br>% | Test<br>Weight<br>lb/bu | Leaf<br>Rust<br>Rating<br>(0-5) | Mildew<br>Rating<br>(0-5) |
|-----------------------|---------------|----------------|----------------|------------------------|--------------|-------------------------|---------------------------------|---------------------------|
|                       |               |                |                |                        |              |                         |                                 |                           |
| Coker 916             | 47            | 4-28           | 6-1            | 30                     | 9.8          | 56.1                    | 0.2                             | 0.8                       |
| Caldwell              | 46            | 4-28           | 6-1            | 33                     | 16.1         | 54.2                    | 0.7                             | 0.8                       |
| Scotty                | 45            | 4-28           | 6-1            | 32                     | 8.7          | 55.5                    | 0.2                             | 0.9                       |
| Compton               | 45            | 4-30           | 6-1            | 32                     | 17.3         | 56.1                    | 0.3                             | 1.2                       |
| Pioneer<br>brand 2550 | 45            | 4-30           | 6-3            | 32                     | 16.9         | 56.2                    | 0.6                             | 1.1                       |
| Auburn                | 44            | 5-4            | 6-5            | 33                     | 7.1          | 55.4                    | 0.0                             | 1.1                       |
| Massey                | 44            | 4-27           | 6-2            | 32                     | 12.4         | 55.4                    | 2.9                             | 0.3                       |
| Magnum                | 43            | 4-27           | 5-30           | 30                     | 7.3          | 55.5                    | 0.8                             | 1.4                       |
| Fillmore              | 43            | 5-5            | 6-6            | 36                     | 14.6         | 52.7                    | 0.3                             | 0.4                       |
| Coker 983             | 43            | 4-28           | 6-2            | 28                     | 5.6          | 56.6                    | 0.4                             | 0.1                       |
| Coker 747             | 43            | 4-28           | 6-1            | 35                     | 10.9         | 55.8                    | 2.1                             | 1.2                       |
| Tyler                 | --1/          | 5-1            | 6-3            | 34                     | 14.4         | 53.7                    | 4.2                             | 1.0                       |
| Florida 302           | --1/          | 4-30           | 6-5            | 30                     | 14.2         | 55.1                    | 0.0                             | 0.1                       |

1/No data for Martin in 1984.



Table 7. Barley: Yield of varieties evaluated at five locations in 1986.

| Variety          | Avg.<br>Across<br>Five<br>Locations | Knox-1/<br>ville | Cross-2/<br>ville | Spring-3/<br>field | Spring <sup>4</sup> /<br>Hill | Jackson <sup>5</sup> /<br>Jackson | Avg. <sup>6</sup> /<br>Spring<br>Hill &<br>Jackson |
|------------------|-------------------------------------|------------------|-------------------|--------------------|-------------------------------|-----------------------------------|----------------------------------------------------|
| Bushels per acre |                                     |                  |                   |                    |                               |                                   |                                                    |
| Wysor            | 46                                  | 32               | 33                | 26                 | 67                            | 75                                | 71                                                 |
| Henry            | 41                                  | 36               | 34                | 29                 | 55                            | 51                                | 53                                                 |
| Kline            | 31                                  | 2                | 14                | 31                 | 45                            | 61                                | 53                                                 |
| Volbar           | 29                                  | 3                | 14                | 20                 | 50                            | 61                                | 55                                                 |
| Anson            | 29                                  | 8                | 13                | 25                 | 51                            | 50                                | 51                                                 |
| Genesis          | 28                                  | 8                | 16                | 19                 | 48                            | 48                                | 48                                                 |
| Dawn             | 27                                  | 7                | 12                | 19                 | 45                            | 49                                | 47                                                 |
| R74-203          | 26                                  | 3                | 12                | 19                 | 39                            | 58                                | 48                                                 |
| Surveyor         | 25                                  | 0.8              | 27                | 20                 | 31                            | 48                                | 25                                                 |
| L.S.D. (.05)     |                                     | 9.4              | 14.1              | 10.9               | 7.4                           | 8.5                               |                                                    |
| C.V. %           |                                     | 58.2             | 49.5              | 32.3               | 10.6                          | 10.4                              |                                                    |
| Avg.             |                                     | 11.1             | 19.6              | 23.0               | 47.9                          | 55.6                              |                                                    |

1/Decatur silt loam (2% to 5% slopes).

2/Hartsells loam (2% to 5% slopes).

3/Dickson silt loam (2% to 5% slopes).

4/Maury silt loam (2% to 5% slopes).

5/Memphis silt loam (2% to 5% slopes).

6/Jackson and Spring Hill yields were averaged due to low C.V.'s. However, even with the high C.V.'s at the other locations, ranking of average yield varied very little. These erratic yields were due to winter killing.

Table 8. Barley: Yield and other characteristics of varieties evaluated at five locations in 1986.

| Variety  | Yield<br>bu/A | Date<br>Headed | Date<br>Mature | Plant<br>Height<br>in. | Weight <sup>1</sup> /<br>per<br>Bushel<br>lbs |
|----------|---------------|----------------|----------------|------------------------|-----------------------------------------------|
| Wysor    | 46            | 4-30           | 5-29           | 29                     | 43.8                                          |
| Henry    | 41            | 4-26           | 5-29           | 28                     | 44.4                                          |
| Kline    | 31            | 5-1            | 6-4            | 28                     | ----2/                                        |
| Volbar   | 29            | 5-1            | 6-3            | 28                     | 41.3                                          |
| Anson    | 29            | 4-30           | 5-30           | 29                     | 38.5                                          |
| Genesis  | 28            | 4-21           | 5-25           | 25                     | 47.6                                          |
| Dawn     | 27            | 4-20           | 5-24           | 26                     | 47.8                                          |
| R74-203  | 26            | 5-3            | 6-4            | 27                     | 40.1                                          |
| Surveyor | 25            | 4-30           | 5-29           | 25                     | ----2/                                        |

1/Knoxville data only

2/Missing data due to winter killing on most plots.

Table 9. Fall Seeded Oats: Yield of varieties evaluated at four locations in 1986.

| Variety             | Avg. | Knoxville <sup>1/</sup> | Springfield <sup>2/</sup> | Spring <sup>3/</sup><br>Hill | Jackson <sup>4/</sup> |
|---------------------|------|-------------------------|---------------------------|------------------------------|-----------------------|
| Bushels per acre    |      |                         |                           |                              |                       |
| Cumberland          | 32   | 16                      | 39                        | 22                           | 52                    |
| Coker 716           | 31   | 15                      | 41                        | 11                           | 59                    |
| Brook's (Hall)      | 30   | 5                       | 37                        | 17                           | 60                    |
| Brook's (N.C.)      | 30   | 6                       | 40                        | 21                           | 52                    |
| AKS County Seed 883 | 29   | 9                       | 41                        | 17                           | 49                    |
| Coker 277           | 22   | 4                       | 31                        | 13                           | 42                    |
| Madison             | --5/ | --                      | --                        | --                           | 29                    |

<sup>1/</sup>Decatur silt loam (2% to 5% slopes).

<sup>2/</sup>Dickson silt loam (2% to 5% slopes).

<sup>3/</sup>Maury silt loam (2% to 5% slopes).

<sup>4/</sup>Memphis silt loam (2% to 5% slopes).

<sup>5/</sup>No yield due to winter kill.

Table 10. Fall Seeded Oats: Yield and other characteristics of varieties evaluated at four locations in 1986.

| Variety             | Yield | Date<br>Headed | Date<br>Mature | Plant<br>Height |
|---------------------|-------|----------------|----------------|-----------------|
|                     | bu/A  |                |                | in.             |
| Cumberland          | 32    | 5-9            | 6-12           | 26              |
| Coker 716           | 31    | 5-9            | 6-11           | 25              |
| Brook's (Hall)      | 30    | 5-8            | 6-11           | 26              |
| Brook's (N.C.)      | 30    | 5-8            | 6-11           | 27              |
| AKS County Seed 883 | 29    | 5-9            | 6-14           | 23              |
| Coker 277           | 22    | 5-7            | 6-12           | 24              |
| Madison             | --1/  | ---            | ----           | --              |

<sup>1/</sup>No yield due to winter kill at most locations.

Table 11. Spring Oats: Yield and other characteristics of varieties evaluated at Knoxville in 1986.<sup>1/</sup>

| Variety      | Yield |      | Date Headed | Date Mature | Plant Height | Weight per Bushel |
|--------------|-------|------|-------------|-------------|--------------|-------------------|
|              | T/A   | bu/A |             |             | in.          | lbs               |
| Don          | 1.44  | 51   | 5-21        | 6-30        | 28           | 30.1              |
| Ogle         | 1.49  | 45   | 5-24        | 6-30        | 30           | 27.6              |
| Larry        | 1.18  | 43   | 5-21        | 6-29        | 26           | 29.1              |
| Noble        | 1.29  | 42   | 5-22        | 6-29        | 28           | 27.2              |
| Otee         | 1.23  | 38   | 5-22        | 6-27        | 26           | 28.7              |
| Bates        | 1.10  | 38   | 5-18        | 6-29        | 26           | 28.7              |
| Porter       | 1.54  | 38   | 5-28        | 6-29        | 29           | 28.2              |
| Lang         | 1.12  | 37   | 5-18        | 6-28        | 28           | 26.7              |
| Hazle        | 1.25  | 35   | 5-26        | 6-29        | 27           | 26.3              |
| Moore        | 1.62  | 31   | 5-28        | 6-30        | 36           | 25.6              |
| Dal          | 1.27  | 30   | 5-30        | 6-30        | 30           | 25.6              |
| Grundy       | 1.25  | 29   | 5-20        | 6-27        | 26           | 26.4              |
| Lodi         | 1.53  | 25   | 6-2         | 7-2         | 38           | 23.4              |
| L.S.D. (.05) | N.S.  | 11.4 |             |             |              |                   |
| C.V. %       | 19.7  | 21.3 |             |             |              |                   |
| Avg.         | 1.35  | 37.2 |             |             |              |                   |

<sup>1/</sup>Decatur silt loam (2% to 5% slopes).

Table 12. Rye: Yield and other characteristics of varieties evaluated at Knoxville in 1986.<sup>1/</sup>

| Variety                          | Yield |      | Date Headed | Plant Height | Lodging | Weight per Bushel |
|----------------------------------|-------|------|-------------|--------------|---------|-------------------|
|                                  | bu/A  | T/A  |             | in.          | %       | lbs               |
| AFC 20-20 <sup>2/</sup>          | 31    | 1.99 | 6-17        | 56           | 60      | 54.0              |
| GI 85 <sup>2/</sup>              | 31    | 2.33 | 6-17        | 55           | 60      | 54.4              |
| N.F. 14 <sup>23/</sup>           | 30    | 2.26 | 6-17        | 57           | 48      | 53.6              |
| GI 87x <sup>2/</sup>             | 29    | 2.24 | 6-16        | 56           | 55      | 54.8              |
| Gurley Grazer 2000 <sup>2/</sup> | 28    | 2.47 | 6-16        | 57           | 45      | 54.1              |
| GI 87 <sup>2/</sup>              | 28    | 2.08 | 6-17        | 56           | 35      | 54.2              |
| N.F. 21 <sup>43/</sup>           | 28    | 2.44 | 6-17        | 56           | 58      | 53.2              |
| Elbon <sup>3/</sup>              | 28    | 2.25 | 6-17        | 55           | 61      | 54.9              |
| Bonel <sup>3/</sup>              | 25    | 2.39 | 6-17        | 55           | 69      | 54.0              |
| Maton <sup>3/</sup>              | 21    | 2.56 | 6-17        | 54           | 86      | 53.7              |
| L.S.D. (.05)                     | N.S.  | 0.28 |             |              |         |                   |
| C.V. %                           | 26.7  | 8.9  |             |              |         |                   |
| Avg.                             | 26.0  | 2.30 |             |              |         |                   |

<sup>1/</sup>Decatur silt loam (2% to 5% slopes).

<sup>2/</sup>Gurley's Seed Co., Selma, NC.

<sup>3/</sup>Samuel Roberts Noble Foundation, Inc., Ardmore, OK.