THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

North Carolina Agricultural Research Service

Whereas, there has been presented to the Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HERETO ANXIED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF EIGHTEEN YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF Viable BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (15 U.S.C. 2327 ET SEQ.)

TOMATO

'NC 8288'

In testimony whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this 29th day of November in the year of our Lord one thousand nine hundred and ninety-one.

Kenneth Verons
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Ed Madigan
Secretary of Agriculture
## APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

**Instructions on reverse**

<table>
<thead>
<tr>
<th>1. NAME OF APPLICANT(S)</th>
<th>2. TEMPORARY DESIGNATION</th>
<th>3. VARIETY NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>N. C. Agricultural Research Service</td>
<td>Experimental</td>
<td>NC 8288</td>
</tr>
<tr>
<td>Dr. R. G. Gardner (Breeder)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code)</th>
<th>5. PHONE (Include area code)</th>
<th>6. GENUS AND SPECIES NAME</th>
<th>7. FAMILY NAME (Botanical)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N. C. State University</td>
<td>919-737-2717</td>
<td>Lycopersicon esculentum</td>
<td>Solanaceae</td>
</tr>
<tr>
<td>Box 7601</td>
<td>704-684-3562</td>
<td>(breeder)</td>
<td></td>
</tr>
<tr>
<td>Raleigh, NC 27695-7601</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8. KIND NAME</th>
<th>9. DATE OF DETERMINATION</th>
<th>10. IF THE APPLICANT NAMED IS NOT A “PERSON,” GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomato</td>
<td>March 30, 1987</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11. IF INCORPORATED, GIVE STATE OF INCORPORATION</th>
<th>12. DATE OF INCORPORATION</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

<table>
<thead>
<tr>
<th>13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael W. Baker, Manager</td>
</tr>
<tr>
<td>P. O. Box 33245, Method Station</td>
</tr>
</tbody>
</table>

| 14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED | |
|---------------------------------------------------------| |
| a. X Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.) | c. X Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.) |
| b. X Exhibit B, Novelty Statement | d. X Exhibit D, Additional Description of the Variety |

<table>
<thead>
<tr>
<th>15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes (If “Yes,” answer items 16 and 17 below)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>17. IF “YES” TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>18. DID THE APPLICANT(S) FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes (If “Yes,” give date)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>19. HAS THE VARIETY BEEN OFFERED FOR SALE OR MARKETED IN THE U.S. OR OTHER COUNTRIES?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes (If “Yes,” give names of countries and dates)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.</td>
</tr>
<tr>
<td>Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SIGNATURE OF APPLICANT</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(NCARS)</td>
<td>11/17/87</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SIGNATURE OF APPLICANT</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Breeder)</td>
<td>10/22/87</td>
</tr>
</tbody>
</table>
Tomato
NC 8288

14A. Exhibit A:

Pedigree: 'Piedmont' x 'Florida 1B'

\[ \downarrow \]

\[ F_7 = NC 8288 \]

NC 8288, an inbred line in the F_7 generation, was developed by the pedigree system of breeding. Single plant selections were made in the F_2 through F_5 generations grown in field plots at Fletcher, NC. A special bulk was made in the F_6 generation. Seedling inoculation tests in the greenhouse and trials on naturally infested soil showed the F_2 and subsequent generations to be homozygous resistant to race 1 (Ve gene) of Verticillium dahliae. The F_7 was determined homozygous resistant to races 1 and 2 (I-2 gene) of Fusarium oxysporum f. sp. lycopersici in greenhouse seedling inoculation tests.

NC 8288 appeared stable and uniform in the F_4 through F_6 generations in research station plots and in trials of several thousand plants in grower fields. The only offtypes observed were infrequent male steriles, which did not exceed the percentage normally seen in other varieties.
14B. Exhibit B: Novelty Statement

NC 8288 is most similar to 'Florida 1B'. NC 8288 differs from 'Florida 1B' in having the u gene for uniform light green fruit color of non-ripe fruit, compared to the dark green shoulder color of 'Florida 1B'.
OBJECTIVE DESCRIPTION OF VARIETY

TOMATO (Lycopersicon esculentum Mill.)

NAME OF APPLICANT(S)

N. C. Agricultural Research Service
Dr. R. G. Gardner (Breeder)

ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code)

N. C. State University
Box 7601
Raleigh, NC 27695-7601

TEMPORARY DESIGNATION

Experimental

VARiETY NAME

NC 8288

FOR OFFICIAL USE ONLY

PVPO NUMBER

8800059

Choose responses for the following characters which best fit your variety. Complete this form as fully as possible for best characterization of the variety. When a single quantitative value is requested (e.g., fruit weight), your answer should be the mean of an adequate-sized, unbiased sample of plants. Use leading zeroes when necessary (e.g., 09 or 081, etc.). The applicant variety should be compared with at least one well-known standard check variety of the same type (see list of recommended check varieties below), and grown in the same trials. The characters on this form should be described from plants grown under normal conditions of culture for the variety. Indicate by X whether trial data are from greenhouse or field plantings. Trials direct-seeded or transplanted X; staked X or unstaked . Give locations and dates of seeding and transplanting here:

Fletcher, North Carolina. Seeding dates: 4/20/87 and 5/18/87; transplant dates: 5/22/87 and 6/24/87

COMPARISONS SHOULD BE MADE TO ONE OR MORE CHECK VARIETIES IN THE FOLLOWING LIST, IF AT ALL POSSIBLE. ENTER THE NUMBER OF THE CHECK IN BOXES WHERE IDENTITY OF CHECK IS REQUESTED.

1 = Ace 55 VF
2 = Campbell 37
3 = Chico III
4 = Flora Dade
5 = Florida MH-1
6 = Heinz 1350
7 = Homestead 24
8 = Marglobe
9 = Murietta
10 = New Yorker
11 = Ohio MR-13
12 = Red Cherry Large
13 = Red Rock
14 = Roma VF
15 = Rutgers
16 = Sunray
17 = Tropic
18 = UC 82
19 = VF 134
20 = US 28
21 = VF 145 B 789
22 = Other (Specify) Florida 1B

1. SEEDLING:

2 Anthocyanin in hypocotyl of 2-15 cm. seedling: 1 = Absent 2 = Present 1 Habit of 3-4 week old seedling: 1 = Normal 2 = Compact

2. MATURE PLANT (at maximum vegetative development):

Growth: 1 = Indeterminate 2 = Determinate

Form: 1 = Lax, open 2 = Normal 3 = Compact

Size of canopy (compared to others of similar type): 1 = Small 2 = Medium 3 = Large

Habit: 1 = Sprawling (decumbent) 2 = Semi-erect 3 = Erect (‘Dwarf Champion’)

Cm. Height: 0 7 0

3. STEM:

Branching: 1 = Sparse (‘Brehm’s Solid Red’, ‘Fireball’) 2 = Intermediate (‘Westover’) 3 = Profuse (‘UC 82’)

Branching at cotyledonary or first leafy node: 1 = Present 2 = Absent

No. of nodes below the first inflorescence: 1 = 1-4 2 = 4-7 3 = 7-10 4 = 10 or more

No. of nodes between early (1st - 2nd, 2nd - 3rd) inflorescences.

Pubescence on younger stems: 1 = Smooth (no long hairs) 2 = Sparsely hairy (scattered long hairs) 3 = Moderately hairy 4 = Densely hairy or woolly

4. LEAF (mature leaf beneath the 3rd inflorescence):

Type: 1 = Tomato 2 = Potato (‘Trip-L-Crop’) 3 = Morphology (choose illustration on pg. 5 of this form that is most similar)

Margins of major leaflets: 1 = Nearly entire 2 = Shallowly toothed or scalloped 3 = Deeply toothed or cut, esp. towards base

Marginal rolling or withness: 1 = Absent 2 = Slight 3 = Moderate 4 = Strong

Onset of leaflet rolling: 1 = Early-season 2 = Mid-season 3 = Late season
4. LEAF (mature leaf beneath the 3rd inflorescence - continued):

- Surface of major leaflets:
  1 = Smooth
  2 = Rugose (bumpy or veiny)

- Pubescence:
  1 = Smooth (no long hairs)
  2 = Normal
  3 = Hirsute
  4 = Wooly

5. INFLORESCENCE (make observations on 3rd inflorescence):

- Type:
  1 = Simple
  2 = Forked (2 major axes)
  3 = Compound (much branched)

- Number of flowers in inflorescence, average:

- Leafy or “running” inflorescences:
  1 = Absent
  2 = Occasional
  3 = Frequent

6. FLOWER:

- Calyx:
  1 = Normal, lobes awl-shaped
  2 = Macrocalyx, lobes large, leaflike
  3 = Fleshy

- Calyx-lobes:
  1 = Shorter than corolla
  2 = Approx. equalling corolla
  3 = Distinctly longer than corolla

- Corolla color:
  1 = Yellow
  2 = Old gold
  3 = White or tan

- Style pubescence:
  1 = Absent
  2 = Sparse
  3 = Dense

- Anthers:
  1 = All fused into tube
  2 = Separating into 2 or more groups at anthesis

- Fasciation (1st flower of 2nd or 3rd inflorescence):
  1 = Absent
  2 = Occasionally present
  3 = Frequently present

7. FRUIT (3rd fruit of 2nd or 3rd cluster): For the first 5 characters below, match your variety with the most similar illustration on pg. 5 of this form.

- Typical fruit shape:
  1

- Shape of transverse section:

- Shape of stem end:

- Shape of pistil scar:

- Abscission layer:
  1 = Present (pedicellate)
  2 = Absent (jointless)

- mm length of pedicel (from joint to calyx attachment):

- mm length of mature fruit (stem axis):

- mm diameter of fruit at widest point:

- g weight of mature fruit:

- No. of locules:
  1 = Two
  2 = Three and four
  3 = Five or more

- Fruit surface:
  1 = Smooth
  2 = Slightly rough
  3 = Moderately rough or ribbed

- Fruit base color (mature-green stage):
  1 = Light green (‘Lanai’, ‘VF145-F5’)
  2 = Light gray-green (‘Westover’)
  3 = Apple or medium green (‘Honz 1439 VF’)
  4 = Dark green
  5 = Yellow green

- Fruit pattern (mature-green stage):

- Shoulder color if different from base:
  1 = Dark green
  2 = Grey green
  3 = Yellow green

- Fruit color, full-ripe:
  1 = White
  2 = Yellow
  3 = Orange
  4 = Pink
  5 = Red

- Flesh color, full-ripe:
  1 = Yellow
  2 = Pink
  3 = Red/Crimson
  4 = Orange
  5 = Other (Specify)

- Flesh color:
  1 = Uniform
  2 = With lighter and darker areas in walls

- Locular gel color of table-ripe fruit:
  1 = Green
  2 = Yellow
  3 = Red

- Ripening:
  1 = Blossom-to-stem end
  2 = Uniform
### 7. FRUIT (3rd fruit of 2nd or 3rd cluster): Continued

<table>
<thead>
<tr>
<th>1</th>
<th>Ripening:</th>
<th>2 = Uniformly</th>
<th>3 = Outside in</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 = Inside out</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Epidermis color:</td>
<td>2 = Yellow</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 = Colorless</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Epidermis:</td>
<td>2 = Easy-peel</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 = Normal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Epidermis texture:</td>
<td>2 = Average</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 = Tender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Thickness of pericarp</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 = Under 3 mm</td>
<td>2 = 3-6 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 = 3-6 mm</td>
<td>3 = 6-9 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 = 6-9 mm</td>
<td>4 = Over 9 mm</td>
<td></td>
</tr>
</tbody>
</table>

Thickness of pericarp, check var. no. 2

### 8. RESISTANCE TO FRUIT DISORDERS (Use code: 0 = Unknown, 1 = Susceptible, 2 = Resistant)

<table>
<thead>
<tr>
<th>2</th>
<th>Blossom end rot</th>
<th>2 = Cattace</th>
<th>2 = Fruit pox</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Blotchy ripening</td>
<td>2 = Cracking, concentric</td>
<td>2 = Gold fleck</td>
</tr>
<tr>
<td>2</td>
<td>Bursting</td>
<td>2 = Cracking, radial</td>
<td>1 = Graywall</td>
</tr>
</tbody>
</table>

### 9. DISEASE AND PEST REACTION (Use code: 0 = Not tested, 1 = Susceptible, 2 = Resistant). NOTE: If claim of novelty is based wholly or in substantial part upon disease resistance, trial data should be appended. These should specify the method of testing, the reaction of the application variety, and reaction of well-known check varieties grown in the trial (identified by name).

#### VIRAL DISEASES:

- Cucumber mosaic
- Curly top
- Potato-Y virus

#### BACTERIAL DISEASES:

- Bacterial canker (*Corynebacterium michiganense*)
- Bacterial soft rot (*Erwinia carotovora* )
- Bacterial speck (*Pseudomonas tomato*)

#### Fungal DISEASES:

- Anthracnose (*Colletotrichum* spp.)
- Brown root rot or corky root (*Pyrenochaeta lycopersici*)
- Colar rot or stem canker, (*Alternaria solani*)
- Early blight defoliation, (*Alternaria solani*)
- Fusarium wilt, Race 1, (*F. oxysporum f. lycopersici*)
- Fusarium wilt, Race 2
- Fusarium wilt, Race 3
- Gray leaf spot (*Stemphylium* spp.)
- Late blight, Race 0, (*Phytophthora infestans*)
- Late blight, Race 1

Other viral disease (Specify)

Other bacterial disease (Specify)

### Other fungal disease

- Nailhead spot (*Alternaria tomato*)
- Septoria leaf spot (*S. lycopersici*)
- Target leaf spot (*Corynespora cassicola*)
- Verticillium wilt, Race 1 (*V. albo-atrum*)
- Verticillium wilt, Race 2
- Other fungal disease
- Other fungal disease
9. DISEASE AND PEST REACTION (Use code: 0 = Not tested, 1 = Susceptible, 2 = Resistant – Continued)

INSECTS AND PESTS:

- Colorado potato beetle (Leptinotarsa decemlineata) 0
- Southern root knot nematode (Meloidogyne incognita) 0
- Spider mites (Tetranychus spp.) 0
- Sugar beet army worm (Spodoptera exigua) 0
- Tobacco flea beetle (Epitrix hirtipennis) 0

POLLUTANTS:

- Ozone 0
- Sulfur dioxide 0
- Other (Specify) __________

10. CHEMISTRY AND COMPOSITION OF FULL-Ripe FRUITS: Suggested test methods may be found in "Tomato Products," 5th ed., National Canners Assn. Bull. 27-L. Please specify test methods or give a reference to methods used. Fill in table below with values for the new variety and for at least one well-known check variety of similar type grown in the same trial. Specify names or numbers of check varieties.

<table>
<thead>
<tr>
<th>SUBMITTED VARIETY</th>
<th>Check Variety</th>
<th>Check Variety</th>
<th>Check Variety</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Titratable acidity, as % citric</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total solids (dry matter, seeds and skin removed)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soluble solids, as °Brix</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. PHENOLOGY: Express length of developmental stages either as calendar days or as heat units (growing degree days), in degrees Celsius. If heat units are used, indicate the base temperature used in their calculation here __________°C. See paper by Warnock under "References" for method. Give comparative data for at least one check variety; identify checks by name or by number from table on page 1.

<table>
<thead>
<tr>
<th>APPLICATION VARIETY</th>
<th>Check variety</th>
<th>Check variety</th>
<th>Check variety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed to 50% flower (1 open flower on 50% of plants)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seed to once-over harvest (if applicable)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Fruiting season: 1 = Long ('Marglobe')
- 2 = Medium ('Westover')
- 3 = Short, concentrated ('VF 145')
- 4 = Very concentrated ('UC 82')
- Relative maturity in areas tested: 1 = Early
- 2 = Medium early
- 3 = Medium
- 4 = Medium late
- 5 = Late
- 6 = Variable (if relative maturity is known to differ by location or environment, please explain on separate sheet).

12. ADAPTATION: If more than one category applies, list all in rank order.

- Culture: 1 = Field
- 2 = Greenhouse
- Principal use(s): 1 = Home garden
- 2 = Fresh market
- 3 = Whole-pack canning
- 4 = Concentrated products
- 5 = Other (Specify) Parent line for F1 hybrid
- Machine harvest: 1 = Not adapted
- 2 = Adapted
- Regions to which adaptation has been demonstrated:
  - 1 = Northeast
  - 2 = Mid Atlantic
  - 3 = Southeast
  - 4 = Florida
  - 5 = Great Plains
  - 6 = South-central
  - 7 = Intermountain West
  - 8 = Northwest
  - 9 = California: Sacramento and Upper San Joaquin Valley
  - 10 = California: Coastal areas
  - 11 = California: Southern San Joaquin Valley & deserts
ILLUSTRATIONS OF TOMATO LEAF AND FRUIT CHARACTERISTICS

4. LEAF: Morphology:

7. FRUIT: Typical fruit shape:

Shape of transverse section:
1=round  2=flattened  3=angular  4=irregular

Shape of stem end:
1=flat  2=indented

Shape of blossom end:
1=indented  2=flat  3=nipped  4=tapered

Shape of pistil scar:
1=dot  2=stellate  3=linear  4=irregular

REFERENCES


14D. Exhibit D. Additional Description of NC 8288

NC 8288 produced total fruit yield equivalent to 'Florida 1B' (Table 1).

NC 8288 had a lower percentage of fruit cracking and rough blossom scar than 'Florida 1B' for early and total season harvests (Tables 1 and 2). NC 8288 had a lower percentage of fruit in early season with zippers (adnate anther scar) than 'Florida 1B' (Table 2).

NC 8288 produced a higher percentage of marketable grade fruit (U.S. No. 1 + U.S. No. 2 + U.S. No. 3) and a lower percentage of cull grade fruit for total season than 'Florida 1B' (Table 1).

NC 8288 produced higher marketable and U. S. Combination Grade (U.S. No. 1 + U.S. No. 2) yield than 'Florida 1B' (Table 1).

Average fruit weight of NC 8288 was equivalent to that of 'Florida 1B' (Tables 1 and 2).

NC 8288 has the n gene (derived from 'Florida 1B') for nipple tip at the stylar end of the fruit. Under most conditions the blossom scar of NC 8288 is pinpoint with no expression of nipple tip. However, under some field conditions and in the greenhouse during the winter, NC 8288 exhibits prominent nipple tip on some fruit. In association with the n gene, NC 8288, like 'Florida 1B' and other varieties with the n gene, exhibits a characteristic marginal curl of leaves.

The plant of NC 8288 is larger than that of 'Florida 1B'. The plant height of staked plants of NC 8288 was 70 cm compared to 55 cm for 'Florida 1B'.

NC 8288 is slightly later in maturity than 'Florida 1B' (Table 2, total yield for early season).
Table 1. Total season yield and fruit characteristics of NC 8288 compared to 'Florida 1B', Fletcher, N. C. stake culture trial, 1987.

<table>
<thead>
<tr>
<th></th>
<th>Yield (Tons/acre)</th>
<th>Fruit grade (Percent)</th>
<th>Fruit size (Percent)</th>
<th>Fruit wt. (gms/fruit)</th>
<th>Fruit defects (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Mkt. Comb.</td>
<td>Mkt. Grade Cull</td>
<td>Extra Jumbo large</td>
<td></td>
<td>Cracking Rough</td>
</tr>
<tr>
<td>NC 8288</td>
<td>44.3</td>
<td>58.2</td>
<td>56.8</td>
<td>313</td>
<td>24.6</td>
</tr>
<tr>
<td>'Florida 1B'</td>
<td>39.4</td>
<td>48.9</td>
<td>46.0</td>
<td>281</td>
<td>35.7</td>
</tr>
<tr>
<td>LSD(.05)</td>
<td>NS</td>
<td>8.5 NS NS NS</td>
<td>NS NS NS</td>
<td>NS</td>
<td>NS</td>
</tr>
</tbody>
</table>

Table 2. Early season (first 2 weeks of harvest) yield and fruit characteristics of NC 8288 compared to 'Florida 1B', Fletcher, N. C. stake culture trial, 1987.

<table>
<thead>
<tr>
<th></th>
<th>Yield (Tons/acre)</th>
<th>Fruit grade (Percent)</th>
<th>Fruit size (Percent)</th>
<th>Fruit wt. (gms/fruit)</th>
<th>Fruit defects (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Mkt. Comb.</td>
<td>Mkt. Comb. Cull</td>
<td>Extra Jumbo large</td>
<td></td>
<td>Cracking Rough</td>
</tr>
<tr>
<td>NC 8288</td>
<td>17.3</td>
<td>84.8</td>
<td>37.3</td>
<td>291</td>
<td>0</td>
</tr>
<tr>
<td>'Florida 1B'</td>
<td>24.9</td>
<td>73.8</td>
<td>40.1</td>
<td>281</td>
<td>10.8</td>
</tr>
<tr>
<td>LSD(.05)</td>
<td>NS</td>
<td>NS NS NS NS</td>
<td>NS NS NS</td>
<td>NS</td>
<td>NS</td>
</tr>
</tbody>
</table>

*Marketable yield = U.S. No. 1 + U.S. No. 2 + U.S. No. 3

*U. S. Combination Grade yield = U.S. No. 1 + U.S. No. 2
TOMATO
NC 8288

Exhibit E. Statement of the Basis of Applicant's Ownership

'NC 8288' was developed by Dr. R.G. Gardner, Associate Professor of Horticultural Science with the N.C. Agricultural Research Service (NCARS) College of Agriculture and Life Sciences, N.C. State University. 'NC 8288' is owned exclusively by the NCARS who retains all rights to its use.