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 HEREBITO ANNEXED 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 SUCCESSIONS, 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 (7 U.S.C. 2321 ET SEQ.)

TOMATO

'NC 10'

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 31st day of January in the year of our Lord one thousand nine hundred and ninety-two.

[Signature]

Commissioner

Plant Variety Protection Office

[Signature]

Secretary of Agriculture
APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate)
   N.C. Agricultural Research Service
   Dr. R. G. Gardner (Breeder)

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO.
   86487-1-1

3. VARIETY NAME
   NC 1C

4. ADDRESS (street and no. or R.F.D. no., city, state, and ZIP)
   N.C. State University
   Box 7643
   Raleigh NC 27695-7643

5. PHONE (include area code)
   919-737-1717
   704-684-3562
   (Breeder)

6. GENUS AND SPECIES NAME
   Lycopersicon esculentum

7. FAMILY NAME (Botanical)
   Solanaceae

8. CROP KIND NAME (Common Name)
   Cherry Tomato

9. DATE OF DETERMINATION
   March 21, 1990

10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.)
    State Governmental Agency

11. IF INCORPORATED, GIVE STATE OF INCORPORATION

12. DATE OF INCORPORATION

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
    Michael W. Baker, Manager
    NC Foundation Seed Producers, Inc.
    P.O. Box 33245, Methodist Station
    Raleigh, NC 27635

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow INSTRUCTIONS on reverse)
    a. Exhibit A, Origin and Breeding History of the Variety.
    b. Exhibit B, Novelty Statement.
    c. Exhibit C, Objective Description of Variety.
    d. Exhibit D, Additional Description of Variety.
    e. Exhibit E, Statement of the Basis of Applicant’s Ownership.
    f. Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office
    g. Filing and Examination Fee ($2,150) made payable to "Treasurer of the United States.”

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.)
    ☑ YES (If "YES,” answer items 16 and 17 below)  ☑ NO (If "NO," skip to item 18 below)

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY IS BE LIMITED AS TO NUMBER OF GENERATIONS?
    ☑ YES  ☑ NO

17. IF "YES” TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
    ☑ FOUNDATION  ☑ REGISTERED  ☑ CERTIFIED

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?
    ☑ YES (If "YES,” through ☑ Plant Variety Protection Act ☑ Patent Act Give date:_________)
    ☑ NO

19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
    ☑ YES (If "YES,” give names of countries and dates)
    ☑ NO

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.

   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.

   Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT (Owner(s))

CAPACITY OR TITLE
Director, NC Agri. Res. Svc.

DATE
11/14/90

SIGNATURE OF APPLICANT (Owner(s))

CAPACITY OR TITLE
Assoc. Prof. of Horticulture (Plant Breeder)

DATE
Nov. 13, 1990
Tomato
NC 1C

14A. Exhibit A:

Pedigree:

\[
\begin{array}{c|c|c|c}
86487(X) & - & NY402 \\
-1-1-BK & -8675-3 & -NY402 \\
F_5 & -8534-1 & -NY402 \\
= NC 1C & 84423-1-7 & -BHNS40028 \\
&& -8414 -NY402 \\
&& -8337(X)-3-17 -Castlette \\
&& -Mini Rose
\end{array}
\]

NC 1C, an inbred cherry tomato line in the F_5 generations, was developed using a combination of pedigree and backcross breeding methods. NY402 was used as a recurrent parent. Selection was made in the F_2 or F_3 generation following crossing to NY402 for plant and fruit characteristics of NY402 combined with the Ve gene for resistance to race 1 of *Verticillium dahliae* and for the jointless pedicel characteristic (1-2). Single plant selections made in the F_3 and F_4 generations of the line 86487 were homozygous for the Ve and 1-2 genes. Seedling inoculation trials in the greenhouse indicated the F_5 generation to be susceptible to races 1 and 2 of *Fusarium oxysporum* f. sp. *lycopersici.*

NC 1C appeared stable in the F_4 and F_5 generations in research station plots. No offtypes were observed.
Exhibit B. Novelty Statement

NC 1C is most similar to the cherry tomato breeding line NY402. It differs from NY402 in having the \textit{Ve} gene for resistance to race 1 of \textit{Verticillium dahliae} (verticillium wilt). NC 1C has the \textit{j-2} gene for jointless fruit pedicel which distinguishes it from NY402 and many other cherry tomato cultivars and breeding lines.
**OBJECTIVE DESCRIPTION OF VARIETY**

**TOMATO** *(Lycopersicon esculentum Mill.)*

**NAME OF APPLICANT(S):**  
NC Agricultural Research Service  
Dr. R. G. Gardner (Breeder)

**ADDRESS:**  
NC State University  
Box 7643  
Raleigh NC 27695-7643

**TEMPORARY DESIGNATION:**  
86487-1-1  
86487(X)-1-1

**VARIETY NAME:**  
NC 1C

**FOR OFFICIAL USE ONLY**  
PVPO NUMBER: 9100050

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., 009 or 0081, 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 a check whether trial data are from greenhouse or field plantings. Trials direct-seeded _X_ or transplanted _X_, staked _X_ or unstaked _X_. Give locations and dates of seeding and transplanting here:

Fletcher, North Carolina. Seeding dates: 4/15/88, 4/17/89, 4/16/90  
Transplant dates: 5/30/88, 5/31/89, 5/25/90

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

2. **MATURE PLANT** (at maximum vegetative development):
   - Cm. Height: 100
   - Growth: 1 = Indeterminate 2 = Determinate
   - Form: 1 = Lax, open 2 = Normal 3 = Compact 4 = Dwarf 5 = Brachytic
   - Size of canopy (compared to others of similar type): 1 = Small 2 = Medium 3 = Large
   - Habit of canopy (decumbent or semi-erect):
     - 1 = Spreading (decumbent) 2 = Semi-erect 3 = Erect ('Dwarf Champion')

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 = 5-7 3 = 7-10 4 = 10 or more
   - No. of nodes between early (1st - 2nd, 2nd - 3rd) inflorescences: 1
   - Pubescence on younger stems:
     - 1 = Smooth (no long hairs) 2 = Sparsely hairy (scattered long hairs)
     - 3 = Moderately hairy 4 = Densely hairy or wooly

4. **LEAF** (mature leaf beneath the 3rd inflorescence):
   - Type: 1 = Tomato 2 = Potato ('Trip-L-Crop')
   - 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 wittiness: 1 = Absent 2 = Slight 3 = Moderate 4 = Strong
   - Onset of leaflet rolling: 1 = Early-season 2 = Mid-season 3 = Late season

---

**FORM LMGS-470-55 (2-82)**
4. LEAF (mature leaf beneath the 3rd inflorescence -- continued):

| 1 | Surface of major leaflets: | 1 = Smooth | 2 = Rugose (bumpy or veiny) |
| 2 | Pubescence: | 1 = Smooth (no long hairs) | 2 = Normal | 3 = Hirsute | 4 = Wooly |

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

| 1 | Type: | 1 = Simple | 2 = Forked (2 major axes) | 3 = Compound (much branched) |
| 0 | Number of flowers in inflorescence, average |
| 1 | Leafy or "running" inflorescences: | 1 = Absent | 2 = Occasional | 3 = Frequent |

6. FLOWER:

| 1 | Calyx: | 1 = Normal, lobes awl-shaped | 2 = Macrocalyx, lobes large, leaflike | 3 = Fleshy |
| 1 | Calyx-lobes: | 1 = Shorter than corolla | 2 = Approx. equalling corolla | 3 = Distinctly longer than corolla |
| 1 | Corolla color: | 1 = Yellow | 2 = Old gold | 3 = White or tan |
| 1 | Style pubescence: | 1 = Absent | 2 = Sparse | 3 = Dense |
| 1 | Anthers: | 1 = All fused into tube | 2 = Separating into 2 or more groups at anthesis |
| 1 | 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.

| 1 | Typical fruit shape: |
| 2 | Shape of transverse section: |
| 2 | Shape of stem end: |
| 2 | Shape of blossom end: |
| 2 | Shape of pistil scar: |
| 2 | Abscission layer: | 1 = Present (pedicellate) | 2 = Absent (jointless) |
| 0 | mm length of pedicel (from joint to calyx attachment): |
| 0 | mm length of mature fruit (stem axis): |
| 0 | mm diameter of fruit at widest point: |
| 0 | g weight of mature fruit: |
| 2 | Point of detachment of fruit at harvest: | 1 = At pedicel joint | 2 = At calyx attachment |
| 2 | No. of locules: | 1 = Two | 2 = Three and four | 3 = Five or more |
| 1 | Fruit surface: | 1 = Smooth | 2 = Slightly rough | 3 = Moderately rough or ribbed |
| 1 | Fruit base color (mature-green stage): | 1 = Light green ('Lanai', 'VF146-F6') | 2 = Light gray-green ('Wistower') | 3 = Apple or medium green ('Heinz 1439 VF') | 4 = Yellow green |
| 1 | Fruit pattern (mature-green stage): | 1 = Uniform green | 2 = Green-shouldered | 3 = Radial stripes on sides of fruit |
| | Shoulder color if different from base: | 1 = Dark green | 2 = Grey green | 3 = Yellow green |
| 1 | Fruit color, full-ripe: | 1 = White | 2 = Yellow | 3 = Orange | 4 = Pink | 5 = Red |
| 2 | Flesh color, full-ripe: | 1 = Yellow | 2 = Pink | 3 = Red/Crimson | 4 = Orange | 5 = Other (Specify) |
| 1 | Flesh color: | 1 = Uniform | 2 = With lighter and darker areas in walls |
| 1 | Locular gel color of table-ripe fruit: | 1 = Green | 2 = Yellow | 3 = Red |
| 2 | Ripening: | 1 = Blossom-to-stem end | 2 = Uniform |
7. FRUIT (3rd fruit of 2nd or 3rd cluster): Continued

1  Ripening: 1 = Inside out  2 = Uniformly  3 = Outside in
2  Epidermis color: 1 = Colorless  2 = Yellow
1  Epidermis: 1 = Normal  2 = Easy-peel
2  Epidermis texture: 1 = Tender  2 = Average  3 = Tough
2  Thickness of pericarp 1 = Under 3 mm  2 = 3-6 mm  3 = 6-9 mm  4 = Over 9 mm

2  Thickness of pericarp, check var. no.

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

2  Blossom end rot
2  Blotchy ripening
2  Bursting
2  Catface
2  Cracking, concentric
2  Cracking, radial
2  Fruit pox
2  Gold fleck
2  Other (Specify)
2  Zippering

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:
0  Cucumber mosaic
0  Curly top
0  Potato-Y virus
0  Other virus (Specify)
0  Tobacco mosaic, Race 0
0  Tobacco mosaic, Race 1
0  Tobacco mosaic, Race 2
0  Tomato spotted wilt
0  Tomato yellows

BACTERIAL DISEASES:
1  Bacterial canker (Corynebacterium michiganense)
0  Bacterial soft rot (Erwinia carotovora)
0  Bacterial speck (Pseudomonas solanacearum)
0  Other bacterial disease (Specify)
0  Bacterial spot (Xanthomonas vesicatorium)
0  Bacterial wilt, (Pseudomonas solanacearum)

Fungal DISEASES:
0  Anthracnose (Colletotrichum spp.)
0  Brown root rot or corky root, (Pyrenochaeta lycopersici)
0  Collar rot or stem canker, (Alternaria solani)
1  Early blight defoliation, (Alternaria solani)
0  Fusarium wilt, Race 1, (F. oxysporum f. lycopersici)
0  Fusarium wilt, Race 2
0  Fusarium wilt, Race 3
0  Gray leaf spot (Stemphylium spp.)
0  Late blight, Race 0, (Phytophthora infestans)
0  Late blight, Race 1
0  Leaf mold, Race 1 (Cladosporium fulvum)
0  Leaf mold, Race 2
0  Leaf mold, Race 3
0  Leaf mold, other races (Specify)
0  Nailhead spot (Alternaria tomatob)
0  Septoria leafspot (S. lycopersici)
0  Target leafspot (Corynespora cassicola)
0  Verticillium wilt, Race 1 (V. albo-atrum)
0  Verticillium wilt, Race 2
0  Other fungal disease
0  Other fungal disease
9. DISEASE AND PEST REACTION (Use code: 0 = Not tested, 1 = Susceptible, 2 = Resistant – Continued)

**INSECTS AND PESTS:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Colorado potato beetle (Leptinotarsa decemlineata)</td>
<td>0</td>
<td>Tomato hornworm (Manduca quinquemaculata)</td>
</tr>
<tr>
<td>0</td>
<td>Southern root knot nematode (Meloidogyne incognita)</td>
<td>0</td>
<td>Tomato fruitworm (Heliotris zea)</td>
</tr>
<tr>
<td>0</td>
<td>Spider mites (Tetranychus spp.)</td>
<td>0</td>
<td>Whitefly (Trialeurodes vaporarium)</td>
</tr>
<tr>
<td>0</td>
<td>Sugar beet army worm (Spodoptera exigua)</td>
<td>0</td>
<td>Other (Specify)</td>
</tr>
<tr>
<td>0</td>
<td>Tobacco flea beetle (Epilachna hirtipennis)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**POLLUTANTS:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>Ozone</td>
</tr>
<tr>
<td>0</td>
<td>Sulfur dioxide</td>
</tr>
<tr>
<td></td>
<td>Other (Specify)</td>
</tr>
</tbody>
</table>

10. CHEMISTRY AND COMPOSITION OF FULL-RIPE FRUITS: Suggested test methods may be found in “Tomato Products,” 8th 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></th>
<th>SUBMITTED VARIETY</th>
<th>Check Variety Cherry Grande</th>
<th>Check Variety Castlette</th>
<th>Check Variety</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>4.2</td>
<td>4.1</td>
<td>4.1</td>
<td></td>
</tr>
<tr>
<td>Titratable acidity, as % citric</td>
<td></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>
<td></td>
</tr>
<tr>
<td>Soluble solids, as Brix at 21°C</td>
<td>5.3</td>
<td>3.9</td>
<td>4.1</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></th>
<th>APPLICATION VARIETY</th>
<th>Check variety Cherry Grande</th>
<th>Check variety Castlette</th>
<th>Check variety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeding to 50% flower (1 open flower on 50% of plants)</td>
<td>53.3 days</td>
<td>53.5 days</td>
<td>56 days</td>
<td></td>
</tr>
<tr>
<td>Seed to once-over harvest (if applicable)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2  Fruiting season: 1 = Long ('Marglobe')  2 = Medium ('Westover')  3 = Short, concentrated ('VF 145')  4 = Very concentrated ('UC 82')

1  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.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Culture:</td>
<td>1 = Field  2 = Greenhouse</td>
</tr>
<tr>
<td>Principal use(s):</td>
<td>1 = Home garden  2 = Fresh market  3 = Whole-pack canning  4 = Concentrated products  5 = Other (Specify) Parent line for F₁ hybrid</td>
</tr>
<tr>
<td>Machine harvest:</td>
<td>1 = Not adapted  2 = Adapted</td>
</tr>
<tr>
<td>Regions to which adaptation has been demonstrated:</td>
<td>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 &amp; deserts</td>
</tr>
</tbody>
</table>
4. LEAF: Morphology:

7. FRUIT: Typical fruit shape:

Shape of transverse section:

1=round  2=flattened  3=angular  4=irregular

Shape of blossom end:

1=indented  2=flat  3=nipped  4=tapered

Shape of stem end:

1=flat  2=indented

Shape of pistil scar:

1=dot  2=stellate  3=linear  4=irregular

REFERENCES


Exhibit D. Additional Description of NC 1C

NC 1C produced yields lower than the F₁ hybrids 'Cherry Grande' and 'Castlette' in replicated trials (Table 1).

NC 1C has smaller fruit than the F₁ hybrid cultivars 'Cherry Grande' and 'Castlette' (Tables 2, 3, and 4).

NC 1C is similar in season of maturity to the cultivar 'Cherry Grande' and earlier in maturity than 'Castlette' (Table 5).
Table 1. Marketable yield (15-lb. flats/acre) of cherry tomatoes. MHCARS, Fletcher, NC.

<table>
<thead>
<tr>
<th>Cultivar or line</th>
<th>1986</th>
<th>1987</th>
<th>1988</th>
<th>1989</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cherry Grande</td>
<td>4160</td>
<td>4620</td>
<td>5819</td>
<td>5034</td>
</tr>
<tr>
<td>Castlette</td>
<td>4603</td>
<td>6472</td>
<td>6185</td>
<td>4868</td>
</tr>
<tr>
<td>NC 8642</td>
<td>4095</td>
<td>4771</td>
<td>6086</td>
<td>5133</td>
</tr>
<tr>
<td>NC 1C</td>
<td>--</td>
<td>--</td>
<td>4835</td>
<td>3727</td>
</tr>
<tr>
<td>NC 2C</td>
<td>4240</td>
<td>6321</td>
<td>6447</td>
<td>4467</td>
</tr>
<tr>
<td>LSD(.05)</td>
<td>356</td>
<td>515</td>
<td>730</td>
<td>633</td>
</tr>
</tbody>
</table>

Table 2. Percent of cherry tomato yield with fruit diameter of 1 1/4"-1 1/2". MHCARS, Fletcher, NC.

<table>
<thead>
<tr>
<th>Cultivar or line</th>
<th>1986</th>
<th>1987</th>
<th>1988</th>
<th>1989</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cherry Grande</td>
<td>46</td>
<td>48</td>
<td>58</td>
<td>40</td>
</tr>
<tr>
<td>Castlette</td>
<td>70</td>
<td>61</td>
<td>56</td>
<td>68</td>
</tr>
<tr>
<td>NC 8642</td>
<td>50</td>
<td>48</td>
<td>61</td>
<td>70</td>
</tr>
<tr>
<td>NC 1C</td>
<td>--</td>
<td>--</td>
<td>49</td>
<td>51</td>
</tr>
<tr>
<td>NC 2C</td>
<td>69</td>
<td>58</td>
<td>66</td>
<td>66</td>
</tr>
<tr>
<td>LSD(.05)</td>
<td>7</td>
<td>7</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 3. Percent of cherry tomato yield with fruit diameter of 1"-1 1/4". MHCARS, Fletcher, NC.

<table>
<thead>
<tr>
<th>Cultivar or line</th>
<th>1986</th>
<th>1987</th>
<th>1988</th>
<th>1989</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cherry Grande</td>
<td>6</td>
<td>8</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Castlette</td>
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<td>33</td>
<td>17</td>
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<td>46</td>
<td>37</td>
<td>23</td>
</tr>
<tr>
<td>NC 1C</td>
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<td>--</td>
<td>46</td>
<td>46</td>
</tr>
<tr>
<td>NC 2C</td>
<td>18</td>
<td>34</td>
<td>25</td>
<td>28</td>
</tr>
<tr>
<td>LSD(.05)</td>
<td>9</td>
<td>9</td>
<td>6</td>
<td>10</td>
</tr>
</tbody>
</table>
Table 4. Percent of cherry tomato yield with fruit diameter greater than 1 1/2".  MHCRS, Fletcher, NC.

<table>
<thead>
<tr>
<th>Cultivar or line</th>
<th>1986</th>
<th>1987</th>
<th>1988</th>
<th>1989</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cherry Grande</td>
<td>48</td>
<td>43</td>
<td>32</td>
<td>56</td>
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<tr>
<td>Castlette</td>
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<td>7</td>
<td>4</td>
<td>14</td>
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<tr>
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<td>4</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>NC 1C</td>
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<td>--</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>NC 2C</td>
<td>13</td>
<td>6</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>LSD(.05)</td>
<td>3</td>
<td>6</td>
<td>4</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 5. Marketable yield (15-lb. flats/acre) of cherry tomatoes during first two weeks of harvest.  MHCRS, Fletcher, NC.

<table>
<thead>
<tr>
<th>Cultivar or line</th>
<th>1986</th>
<th>1987</th>
<th>1988</th>
<th>1989</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cherry Grande</td>
<td>998</td>
<td>3407</td>
<td>1874</td>
<td>1200</td>
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<td>388</td>
<td>2314</td>
<td>689</td>
<td>431</td>
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<tr>
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<td>2441</td>
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<td>1903</td>
<td>751</td>
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<td>2178</td>
<td>852</td>
<td>486</td>
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<tr>
<td>LSD(.05)</td>
<td>112</td>
<td>285</td>
<td>225</td>
<td>183</td>
</tr>
</tbody>
</table>
TOMATO

NC 1C

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

NC 1C was developed by Dr. R. G. Gardner, Associate Professor of Horticultural Science and plant breeder with the N. C. Agricultural Research Service (NCARS), College of Agriculture and Life Sciences, N. C. State University. NC 1C is owned exclusively by the NCARS which retains all rights to its use.