Chickpea
Kabuli Variety ICCV 6

- High yield and wide adaptation
- Resistant to fusarium wilt and tolerant of root rots
- Tolerant of Heliothis pod borer
- High nodulation capacity
- Well suited for both irrigated and rainfed areas
- Adapted to normal and late sowing

ICRISAT

Plant Material Description no. 12
International Crops Research Institute for the Semi-Arid Tropics
Patancheru, Andhra Pradesh 502324, India

1988
**Purpose of Identification**

A high-yielding and wilt-resistant kabuli variety identified for release in Central and North-West Plain zones of India.

**Origin and Development**

ICCV 6 was developed by pedigree selection from a cross of L 550 (ICC 4973) and L 2 (ICC 4965) made in 1973/74. Following single plant selection in F$_2$ to F$_6$ generations at ICRISAT Center, Patancheru, and at Hisar, it was identified as resistant to wilt in a wilt-sick plot and was bulked in the F$_7$ generation as selection no. ICCX 7385-15-1H-1P-BP. In 1980/81 it was tested in a replicated yield trial at Hisar in which it ranked first out of 49 entries. It was contributed as an entry in the coordinated varietal trial (kabuli) of the All India Coordinated Pulses Improvement Project in 1981/82.

**Synonyms.** ICCX 7385-15-1H-1P-BP; ICCC 32.

**Performance**

ICCV 6 was tested in the All India Gram Coordinated Varietal Trial—Kabuli (GCVT-K) from 1981/82 to 1984/85. In the Central zone of India it produced a mean-seed yield of 2.04 t ha$^{-1}$ compared with 1.81 t ha$^{-1}$ of the check cultivar L 550 over a period of 3 years from 1981/82 to 1983/84 (Table 1). It was also tested in the North-West Plain zone of India from 1981/82 to 1984/85 where it gave a mean seed yield of 2.05 t ha$^{-1}$ as against 1.69 t ha$^{-1}$ of L 550 (Table 2).

After its identification for release in the Central zone, it was evaluated in minikit trials in farmers' fields in Madhya Pradesh state where ICCV 6 (1.59 t ha$^{-1}$) outyielded the check L 550 (1.22 t ha$^{-1}$) by a margin of 30%.

**Table 1. Mean seed yield (t ha$^{-1}$) of ICCV 6 and L 550 in the Kabuli Coordinated Varietal Trial, Central Zone, India, at several locations, from 1981/82 to 1983/84.**

<table>
<thead>
<tr>
<th></th>
<th>1981/82</th>
<th>1982/83</th>
<th>1983/84</th>
<th>Weighted mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICCV 6</td>
<td>1.19</td>
<td>5.21</td>
<td>1.43</td>
<td>2.04</td>
</tr>
<tr>
<td>L 550</td>
<td>0.99</td>
<td>4.83</td>
<td>1.28</td>
<td>1.81</td>
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</tbody>
</table>
Table 2. Mean seed yield (t ha\(^{-1}\)) of ICCV 6 in the Kabuli Coordinated Varietal Trial, North-West Plain Zone, India, at several locations, from 1981/82 to 1984/85.

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<tbody>
<tr>
<td>ICCV 6</td>
<td>1.46</td>
<td>No data</td>
<td>2.86</td>
<td>2.24</td>
<td>2.05</td>
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<tr>
<td>L 550</td>
<td>0.98</td>
<td>No data</td>
<td>2.41</td>
<td>2.04</td>
<td>1.69</td>
</tr>
</tbody>
</table>

**Plant Characters**

ICCV 6 is semierect, of moderate plant height with predominantly basal branching. Being a kabuli, plant parts are green without anthocyanin pigmentation, and the flowers are white.

The variety flowers between 60 and 70 days after sowing in central India, and between 75 and 85 days in northern India. It matures in 130-170 days depending on the growing conditions in different zones.

ICCV 6 is the first kabuli variety that combines high yield potential with resistance to races 1 and 4 of *Fusarium oxysporum* wilt (Table 3) and a high degree of tolerance of root rots.

It is tolerant of attack by *Heliothis* pod borer (3.4% borer damage compared with 9.2% in L 550 at Hisar in 1984/85), and is also relatively tolerant of soil salinity. It has a high nodulation capacity. ICCV 6 has given high yields under both irrigated and rainfed conditions. It is also adapted to late sowing.

Table 3. Incidence of *Fusarium oxysporum* wilt (%) in ICCV 6 at ICRISAT Center in 1977/78 and 1982/83 through 1985/86.

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</thead>
<tbody>
<tr>
<td>ICCV 6</td>
<td>10.3</td>
<td>19.0</td>
<td>19.0</td>
<td>7.0</td>
<td>10.3</td>
<td>25.8</td>
</tr>
</tbody>
</table>

1. Pot screening.

**Seed Characters**

The seeds of ICCV 6 are salmon white and shaped like an owl's head. They are of medium size with a mean 100 seed mass of 20 g, ranging from 18 to 22 g. Comparative data for L 550 are similarly around 20 g.
The seeds are attractive to consumers, with a mean protein content of 21.3%, compared with 20.3% for L 550. The sugar, starch, and ash contents of ICCV 6 are similar to those of L 550. Cooking the seeds takes a slightly longer time than that required for L 550 seeds.