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Breeding of 'Jinmani' Cultivar of Gomchwi with Disease Resistance, High Quality and Yield

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Gomchwi using stuffed leaves is many cultivated for 'Gondalbi(*Ligularia stenocephala*)' among Gomchwi species. 'Gondalbi' species like to be cultivation on farm because of low the incense and the bitter taste, and high yield. But 'Gondalbi' caused to curtail yield that susceptibility of powdery mildew disease and shriveling and death of plant on summer season. To solve this problems, we crossed a Gomchwi and 'Handeari-gomchwi' to have resistance of powdery mildew disease and high yield.

A new Gomchwi cultivar 'Jinmani' was bred by crossing between Gomchwi (*Ligularia fischeri* (Ledeb.) Turcz.) and Handaeri-gomchwi (*Ligularia fischeri* var. *spiciformis* Nakai). The selection and investigation of growth and yield characteristics were conducted from 2007 to 2020 in field and greenhouse of Highland Agriculture Research Institute, NICS, Rural Development Administration. The color of petiole ear was purple. trichome of petiole and leaf back non-existed, and luster of leaf back existed. Density of leaf vein was 4 degree among 1-5 degree in a newly developed cultivar 'Jinmani'. Plant height, leaf length, leaf width and petiole length were 55.7, 21.8, 22.2, and 33.9 ㎝, respectively in the 2nd year of growth characteristics. Plant size was similar with that of 'Gommany'. Bolting and flowering time were Aug. 5 and Sept. 5, respectively, and Bolting and flowering time of 'Gommany' showed similar to Aug. 8 and Sept. 1, respectively. 'Jinmani' showed higher number of leaves (202 ea.) per plant compared to 'Gommany' (159 ea.). Furthermore, yield was 67.9% higher in 'Jinmani' (2,569 g/plant) than in 'Gommany' (1,530 g/plant). 'Jinmani' showed lower leaf thickness (0.66㎜) than 'Gommany' (0.69 ㎜), and consequently showed more hardness in leaf characteristics (25.1 ㎏/㎠) compared to 'Gommany' (24.3㎏/㎠). 'Jinmani' showed similar strong resistance compared to 'Gommany' in the susceptibility of powdery mildew disease.

Key words: Breeding, Gondabi, Handaeri-gomchwi, Yield, Bolting, flowering

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