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Rangahau Ahumāra Kai

Populus yunnanensis in New Zealand



Natural range of *Populus yunnanensis* (yellow line) in China

Native to southern Sichuan and northern Yunnan provinces in south-western China, occurring at low latitudes from 1300 to 3700 m elevation.

Adaptable to many soil conditions and thrives in hot climates with long growing seasons.

Growth rates are rapid – trees can attain heights of 30 m and diameters of 60 cm in 25 years.



Introduction of *Populus yunnanensis* in New Zealand

Year	Source
1930	The clone 'Yunnan' PN 035 imported
1976	Seedlot imported from Beijing, China
1988	Seedlot imported from Kunming, China
1990	Crosses of selected seedlings of the 1976 seedlot with the PN 035 clone



'Yunnan' PN 035

Seedlings of the 1988 seedlot from Kunming, China



Seedlings of the 1988 seedlot from Kunming, China

Poplar seedling	Sex	Stem diameter (cm)	Tree height (m)	Fork height (m)	Crown radius (m)	Wood density (kg m ⁻³)
NZ 88-110-003	Female	54	22	10	8	399
NZ 88-110-005	Female	54	24	12	9	350
NZ 88-110-006	Female	64	29	7	11	356
NZ 88-110-027	Female	52	22	6	9	367
NZ 88-110-028	Male	55	21	5	8	407
NZ 88-110-029	Female	53	23	3	8	385
NZ 88-110-030	Female	48	22	8	7	394
NZ 88-110-032	Male	56	24	4	8	359
NZ 88-110-035	Female	50	21	5	9	421
PN 035	Male	59	29	9	12	384

Seedlings of the 1988 seedlot from Kunming, China



NZ 88-110-003



NZ 88-110-005



NZ 88-110-028



NZ 88-110-032



NZ 88-110-035



PN 035



Selected clones from 1990 cross
of a 1976 seedlot seedling with
the PN 035 clone

Clone	Sex	Stem diameter (cm)	Tree height (m)	Fork height (m)
1	Female	58	29	15
2	Male	60	31	14
3	Female	60	39	18

Hybrids of *Populus yunnanensis*

Clone ID	Name	Poplar species
NZ 5006	Kawa	<i>P. deltoides</i> × <i>yunnanensis</i>
NZ 5007	Toa	<i>P. deltoides</i> × <i>nigra</i> × <i>yunnanensis</i>
NZ 03-011-006		<i>P. deltoides</i> × <i>nigra</i> × <i>yunnanensis</i>
NZ 5040	Plummer	<i>P. angustifolia</i> × <i>yunnanensis</i>
NZ 17-014-050		<i>P. trichocarpa</i> × <i>yunnanensis</i>



'Plummer' NZ 5040

Summary

- *Populus yunnanensis* is well adapted to New Zealand conditions
- Extensively used in poplar hybrids, due to traits such as bitter leaves, leaf rust resistance, and late leaf retention
- There is the opportunity to release new clones to nurseries



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Thank you

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