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Verification for S-genotype of Japanese Pear ‘Housui’, ‘Shinseiki’ and ‘Seigyoku’ by Cross Pollination Test

[Yoshihiko Sato](#)¹⁾, [Osamu Terai](#)¹⁾, [Toshihiro Saito](#)¹⁾, [Kazuyuki Abe](#)
and [Kazuo Kotobuki](#)¹⁾

1) National Institute of Fruit Tree Science, National Agriculture and Food Organization

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The S-phenotypes (self-incompatibility phenotypes) of Japanese pear (Eurydyte Nakai) ‘Chikusui’, ‘Shinseiki’, ‘Seigyoku’ and ‘Housui’ determined by molecular markers were verified by cross pollination test. As an individual S-phenotype, FC-14 was selected from progenies of ‘Kikusui’ (S_2S_4) by cross pollination and progeny tests. ‘Chikusui’, ‘Shinseiki’ and ‘Housui’ were

incompatibility with FC-14, therefore the *S*-phenotype of these cultivars was S_3S_4 . ‘Housui’ indicated cross incompatibility with Nashi Hiratsuka No.1 (‘Ishiiwase’ × ‘Nijisseiki’) × ‘Kousui’] on cross pollination. The *S*-phenotype of Nashi Hiratsuka No.24 and ‘Housui’ was presumed to be S_3S_4 . The *S*-phenotype analysis of Nashi Hiratsuka No.24 and its parents, Nashi ‘Kousui’. This presumption was confirmed by segregation for *S*-phenotype in the cross ‘Housui’ × ‘Hakkou’. Thus, the *S*-phenotypes of ‘Chikusui’, ‘Shinsei’, and ‘Housui’ were consistent with the *S*-genotypes determined by molecular marker analysis.

Key Words: [cross incompatibility](#), [fruit set percentage](#), [phenotype](#)

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