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Raising seedling of Longstalk Peach

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Key words : Longstalk Peach ,raising seedling ,germination rate

Introduction Longstalk peach (*Prunus pedunculata* (Pall) Maxim.) is an important shrub in Inner Mongolia for providing ecological service and browse for livestock. However, due to excessive firewood picking and over grazing, population of longstalk peach have been decreasing dramatically in last several decades and it has become one of the potentially endangered species in the region (Zhao Yizhi, 1991). Previous studies have indicated that it is hard to establish seedlings of longstalk peach using seeds collected from previous year. (Yin Like, Wang Ye, 1990). In this study, we aimed to improve seedling establishing by using seed collected immediately after they are mature.

Materials and methods Seeds were collected as soon as they were mature and were sowed shortly after they were collected. There were three different sowing dates for pot and field experiments which started on 10 July (Table 1). In the field, seeds were sowed at 3cm in depth, 5cm between two seeds and 50cm between two rows with. Four replications (plots) were used, each having 50m² in area. Soil in the same field was used in pot experiment which was conducted in greenhouse. Twenty seeds were sowed in each pot.

Results The results are shown in Table 1. Seeds sowed in the field on 10 July, and 20 July began to emerge on 24 July and 7 August, respectively. However, seeds sowed on 30 July didn't emerge. Seeds sowed in pot on 10 July, 20 July and 30 July emerged on 26 July, 12 August and 10 September, respectively. The average height of longstalk peach seedlings sowed on 10 July in the field was 30cm, while sowed on 20 July was 20cm. All these seedlings emerged evenly, grew well and survived over the coming winter. The average height of longstalk peach seedlings sowed on 10 July in pot was 30cm, while those sowed on 20 July and on 30 July were 20cm and 8 cm, respectively. These seedlings stopped growing after 20 October.

It was observed that after mature, longstalk peach's seeds had no dormant period and began to emerge 2 weeks later. The germination rate was 87% in pot and 68% in field.

Table 1 The state of sowing longstalk peach (Date : day/month).

	sowing time	emergence time	emergence rate	sowing time	emergence time	emergence rate	sowing time	emergence time	emergence rate
Grown in field	10/7	24/7	68%	20/7	7/8	61%	30/7		
Grown in pot	10/7	26/7	87%	20/7	12/8	79%	30/7	10/9	64%

Conclusions Longstalk peach seeds harvested immediately when they were mature had no dormancy and could germinate and establish at reasonable good rate when sowed after they were collected shortly. The seedlings also survived well over the coming winter. Raising longstalk peach seedlings using current year harvested seeds is a viable method to establish longstalk peach plants. This method is simple to adopt and requires less effort in storing seeds and establishing seedling.

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