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Development of influence on the formation phases of plum varieties

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Abstract:This article examines the transition of phenological phases during the growing season of plum varieties with different sapes.

Key words: varieties, phenological phases, methods of formation, flowering times, ripening times.

Currently, 12.1 million tons of plums are grown worldwide. In particular, China is the leader in the production of more than 6.6 million tons of plums per year, Romania is in second place with 512,975 tons. The Russian Federation took 13th place with a harvest of 164,602 tons. The annual production of plums in Uzbekistan is 134,103 tons. This figure is 4.1 kg per person. The average plum yield in our country is 14.5 tons per hectare [10].Presidential Decrees No. PQ-4246 dated March 20, 2019 “On measures for the further development of horticulture and greenhouse farming in Uzbekistan” and dated December 11, 2019 “Further development of the fruit and vegetable and viticulture value chain in the industry” Decisions and resolutions “Creation of products with high added value in the field of fruits and vegetables and viticulture, an increase in export volumes, the development of obsolete and arid lands, an increase in the planting of export agricultural crops in cotton and grain fields “according to additional measures.Based on the identified issues, we set the task of studying the influence of shaping methods when growing plums from fruit crops, which are less common among them, but in demand. Mistakes made when organizing plum orchards, densely planting trees and caring for them, including improper shaping, can negatively affect the quantity and quality of fruits [6].

In gardening, the goal is to obtain the highest quality and most abundant harvest from trees. This issue, on the one hand, requires timely and effective implementation of agrotechnical measures, such as proper pruning and shaping of trees of early, mid- and late varieties.

In the intensive plum orchards created at the Andijan Institute of Agriculture and Agrotechnics, 4 methods of formation and 3 local and introduced varieties were used to study the methods of formation of local and imported varieties of plums.

“Methods and programs for studying varieties of fruit, berries and plums” (Orel, 1999) [6] and methods of calculation and phenological observations in experiments with fruit and berry plants, developed by the All-Russian Research Institute of Fruit Breeding. Kh. Ch. Boriev 2014) [1].

According to the results of the study, when plum varieties are formed differently this year, the transition periods of the growing season also change.

For the Leto plum variety, bud recording began on March 3 in the 4th control variant (Cup).

Buds in option 1 (Austrian bush) 02/III, 1 day before control, in option 2 (Rare level) 04/III, 1 day after control, in option 3 (KGB Kim In Green Bush) buds from 05/III It was found that it was recorded 2 days after control.

In the control variant (Calyx), the beginning of flowering began on the 20/III day, the end of flowering on the 31/III day, the flowering duration was 11 days. In options 1,2,5, flowering began on 21/III and 1 day later than the control, and flowering ended 1 day earlier (30/III) than in all options. Flowering duration is 9-11 days.The cooking period started on 06/VI and ended on 01/VII and the cooking period was 24 days in the control (Cup) variant. In options 1,2 and 5, ripening started on 04/VI and 2 days earlier than the control. In option 4 (KGB Kim Green bush), the ripening period began 1 day earlier than the control, on 05 / VI. The end of the ripening period was 2-4 days earlier than the control in all variants, and the ripening period was 23-25 days.

Bud recording in the plum variety "Berton" began on March 18 in the 4th control (Cup) variant. Bud recording was started in form 3 (KGB Kim Green bush) on 16/III, 2 days before control, and in variant 1 (Austrian bush)

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on 23/III, 5 days after control.In the control (Calyx) variant, the beginning of flowering began on 25/III, the end of flowering ended on 08/III, the duration of flowering is 13 days. In options 1, 2, 5, flowering began on days 26/III and 27/III, 1-2 days later than in the control, and in options 2, 3 and 5, flowering ended 13 days later than in the control. The duration of flowering was 13-16 days.

The cooking period in the control (Cup) variant was 29 / VII, which ended on 21 / VIII, and the cooking period was 23 days. In variant 1 (28/VII), variant 3 (28/VII) and variant 5 (26/VII), the cooking period started 2-3 days before the control. In option 2 (sparse layer), the ripening period began on 30/VII and was 1 day later than the control. The end of the ripening period was 2-5 days earlier than the control in all variants, and the ripening period was 19-23 days.

The effect of methods of shaping plum varieties on the transition of the vegetation period

options	Writing buds		Plant condition before flowering	Flowering				Ripe			
	Bud bulge	Bud opening		The beginning of flowering	Blooming in comparison	The end of flowering	Duration of floweringi	start cooking	cooking	finish cooking	Ripening duration
Leto variety											
Option 1 (Austrian bush)	18/II	02/III	4,4	21/III	27/III	30/III	9	04/VI	18/VI	27/VI	23
Option 2 (Sparse layer)	19/II	04/III	4,4	21/III	25/III	30/III	9	04/VI	19/VI	29/VI	25
Option 3 (KGB Kim Green Bush)	24/II	05/III	4,6	20/III	26/III	30/III	10	05/VI	19/VI	28/VI	23
Option 4 (control cup)	18/II	03/III	4,4	20/III	26/III	31/III	11	06/VI	21/VI	01/VII	24
Option 5 (Not shown)	19/II	03/III	3,4	21/III	27/III	30/III	9	04/VI	19/VI	29/VI	25
Burton											
Option 1 (Austrian bush)	14/III	23/III	4,0	26/III	04/IV	08/IV	13	28/VII	09/VIII	17/VIII	20
Option 2 (Sparse layer)	10/III	19/III	4,0	26/III	06/IV	11/IV	16	30/VII	10/VIII	18/VIII	19

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Option 3 (KGB Kim Green Bush)	12/III	16/III	4,4	25/III	03/IV	09/IV	15	28/VII	10/VIII	19/VIII	22
Option 4 (Cup-shaped)	10/III	18/III	4,4	25/III	02/IV	08/IV	13	29/VII	11/VIII	21/VIII	23
Option 5 (Not shown)	13/III	19/III	3,4	27/III	05/IV	10/IV	14	26/VII	07/VIII	16/VIII	21
Chyornaya bagire											
Option 1 (Austrian bush)	10/III	19/III	4,0	25/III	02/IV	08/IV	14	31/VII	13/VIII	25/VIII	25
Option 2 (Sparse layer)	10/III	22/III	3,8	27/III	03/IV	09/IV	12	01/VIII	13/VIII	26/VIII	25
Option 3 (KGB Kim Green Bush)	11/III	21/III	4,4	26/III	04/IV	10/IV	15	31/VII	11/VIII	22/VIII	23
Option 4 (Cup-shaped)	10/III	19/III	3,6	27/III	03/IV	09/IV	13	01/VIII	12/VIII	24/VIII	23
Option 5 (Not shown)	10/III	19/III	3,4	26/III	02/IV	07/IV	13	01/VIII	13/VIII	26/VIII	25

Bud recording in the plum variety "Chyornaya Bagira" began on March 19 in the 4th control (Cup) variant. Bud recording started on 22/III in variant 2 and 21/III in variant 3, and shoots were recorded 2-3 days later than in the control, and in variants 1 and 5 on the same day as the control variant.

In the control (Cup) variant, the beginning of flowering began on 27/III, the end of flowering ended on 09/IV, the duration of flowering is 13 days. In variant 1 (25/III), variant 3 (26/III) and variant 5, flowering was 1-2 days before control, starting from 26/III, and the end of flowering was controlled in variant 3 (10/IV). 1 day late. The duration of flowering was 13-15 days.

The cooking period started on 01/VIII and ended on 24/VIII in the control (Cup) variant, and the cooking period was 23 days. In option 1 (31/VII) and option 3 (31/VII), the cooking period started 1 day before the control. In option 2 and option 5, the cooking period began on day 01 / VIII, that is, on the same day as the control option. The end of the ripening period ended on 22 / VIII, 2.2 days earlier than the control. In all other options, it was completed 1-2 days earlier than the control, and the cooking period was 23-25 days.

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