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(*Artemisia*)

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A. aucheri *A. kopetdaghensis* *A. diffusa* *A. sieberi*

A. sieberi

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Artemisia :



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Kochia prostrata

Anthemideae (Artemisia)
Asteraceae (Compositae)

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(Artemisia)
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K. prostrata var

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tridentata A.

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A. sieberi

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A. diffusa

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A.

A. kopetdaghensis diffusa

A. aucheri

A. sieberi

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A. () *sieberi*

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(*A. sieberi*)

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A. tridentata

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/ bc	/ e	/ b	/ b	<i>A. sieberi</i>		
/ a	/ b	/ a	/ a	<i>A. sieberi</i>		
/ e	/ e	/ a	/ a	<i>A. diffusa</i>		
/ bc	/ e	/ a	/ a	<i>A. diffusa</i>		
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/ b	/ d	/ a	/ a	<i>A. aucheri</i>		

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(*Artemisia*

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Determination of the Best Seed Harvest Date of Sagebrush (*Artemisia spp.*) in Khorassan Province

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Abstract

Sagebrush (*Artemisia spp.*) is one of the most dominant plant genera in Khorassan rangelands. Because of the small size of floret, seed ripening time should be determined carefully. In order to determine the optimal time for collecting seeds of this plant, a research began in ten areas in the north, center and south of Khorassan Province that lasted 2.5 years. These areas included Bojnord(Ghorkhod, Baghlegh and Biou), Mashhad (Kordian), Torbat-e-Jam (Cheshmehgol), Sabzevar (Ghods, Ghaleh Nordab) and Gonabad (Bimorgh, Ostad and Bajestan). At first, Sagebrush (*Artemisia spp.*) species was identified in Torbat-e-Jam, Sabzevar and Gonabad (*A. sieberi*), Ghourkhod and Baghlagh (*A. diffusa*), Bio (*A. kopetdaghensis*), Kordian (*A. aucheri*). The seeds were collected from the time of setting to shedding time at ten-day intervals over two years. Flowering was also studied in the first year. This experiment was conducted as a factorial design with the aim to find the role of harvesting regions and dates and their interaction effects on determining the optimal date of seed harvest. The Results showed that all species enter the stage of flowering in October and seeds are formed until mid-November. Up to early December seed ripening occurs and seed shedding begins in all species, excluding *A. sieberi*, up to the end of January. On average, the fertile florets in each capitulum amounted to 22%, and the rest were sterile. The analysis of variance also showed there is a significant difference due to various regions and dates of harvest ($P < 0.01$). Furthermore, the percentage of seed germination significantly varied depending on the site and date of harvest. However, almost in all regions, the percentage of germination in last dates of harvest was more than this percentage on early dates by 30%. In this connection, possible shedding of the seeds at the time of harvest is an important factor and attention should not be paid only to viability. Results of this research recommends optimum times for seed harvest on each site were as follows: cheshmeh gol, Beymorgh, Ostad, Ghods, Nordab and Kordian Dec. (5-15), Ghorkhod (Nov. 25- Dec. 5), Baglegh and Bajestan Dec. (1-10). Seeds collected from Sabzevar had maximum germination percentage ($p < 0.05$). The results suggest that seed collection may be delayed to let seeds matured completely before seed shattering.

Key words: Sagebrush, *Artemisia*, seed harvest date, *A. sieberi*, seed ripening, seed germination