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## **Current Status of Plant Resources in The Ferghana Valley and Opportunities To Use Them**

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### **Abstract**

In the southern part of Kurama mountains of North Fergana near Havasay, Chadaksay and Rezaksay on the relatively large areas of medicinal plants found *Eremurus sogdiana*, *Perovskija scrophulariifolia* and other species. And *Ferula tenuisecta*, *Prangos pabularia*, *Ligularia alpigena*, *Lagotis korolkovii*, *Festuca valesiaca* and others meet on the Angren plateau

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## Introduction

In today's globalized and rapidly changing world, effective use of flora as an important and active component of the biosphere is one of the priorities of our policy.

The nature and temperate climatic conditions of the Ferghana Valley make the distribution of rich and colorful plants available here. Of particular importance are the raw herbs that are important to them.

It is known that around 3,000 flora of the valley contain 301 species of alkaloids, 138 essential oils, 115 vitamins, 106 saponins, 156 tannins, 31 colors, 132 colors, 35 fibers, 198 oils and more than 500 beetles.

Large areas of Govasai, Chodaksoy, Rezaksoy and surrounding areas of the northern Kurgan Mountains, such as *Eremurus sogdiana*, *Perovskija scrophulariifolia*, *Artemisia absinthium*, *Ferula tenuisecta*, shrubs *Rosa ecea*, *Cerasus erythrocarpa*, *Atraphaxis sclera*, *A. philipendulina*, *Hypericum scabrium*, *Goebelia pachycarpa*, *Glycyrrhiza glabra*, *Melilotus officinalis*, *Inula grandis*, *Plantago lanceolata*, *Prangos pabularie*, *Cousinia bonvalotii*, *Mentha asiatica*, *Urtica dioica* and others.

To the east of the Kurama Mountains and to a very large area, called Betagali, there is the Angren Lowland (Angrenskoe Plateau), which is 3000 meters above sea level. It is well known that these areas form large grasslands. *Ferula tenuisecta*, *Prangos pabularia*, *Festuca valesiaca*, *Ligularia alpigena*, *Lagotis korolkovii*, *Artemisia dracunculus*, *A.persica*, *Asparagus turestan*, occupy thousands of hectares of pastures in this zone and are the main feed source for livestock.

In the lower part of the ridge there are sparse thickets of mesophilic shrubs. Almonds also occupy some small areas (*Amygdalus spinosissima*).

### Literature review

Representatives of small deciduous trees are scattered along the mountain rivers, river banks and roads. They consist of shrubs and shrubs occupying a small area.

In the upper part of Govasoy, Chodaksoy, Rezaksay and Kosonsoy sparse juniper communities are scattered and there are a number of grass species among them. (*Perovskija scrophulariifolia*)

The upper part of the Akhangaran River, on the left bank of its left bank, is found in a limited area in wet, meadow soils, known as *Aconitum zeravschanicum* Steinb.

Several species of beautiful, ornamental tulips of the Ferghana Valley, included in the Red Book of Uzbekistan, are found in the upper part of Chodaksoy (*Tulipa greigii*, *T.kaufmanii*, *T. ferganica*).

The following are some of the main types of raw herbs distributed in the Northern Fergana area.

### Govaksoy, Chodaksoy, Rezaksay: (Table 1)

| Plant species                       | Square , hectar |
|-------------------------------------|-----------------|
| <i>Eremurus sogdiana</i>            | 398             |
| <i>Perovskija scrophulariifolia</i> | 50              |
| <i>Salvia sclarea</i> L.            | 13              |
| <i>S. virgata</i>                   | 11              |
| <i>Achillea millefolium</i> L.      | 16              |
| <i>A. filipendulina</i> Lam.        | 18              |
| <i>Artemisia absinthium</i> L.      | 105             |
| <i>A. tenuisecta</i> Nevski         | 56              |
| <i>A. dracunculis</i> L.            | 61              |
| <i>Goebelia pachycarpa</i> Bge.     | 12              |
| <i>Melilotus officinalis</i> Desr.  | 5               |
| <i>Ferula tenuisecta</i> Eng.Kor.   | different       |
| <i>Prangos pabularia</i> Lind l .   | different       |
| <i>Cousinia bonvalotii</i> Franch.  | 28              |
| <i>Inula grandis</i> Schrenk.       | 19              |
| <i>Glycyrrhiza glabra</i> L.        | 16              |
|                                     |                 |

|                                    |    |
|------------------------------------|----|
| <i>Urtica dioica</i> L.            | 8  |
| <i>Mentha asiatica</i> Boriss.     | 6  |
| <i>Plantago lanceolata</i> L.      | 9  |
| <i>Rosa ecea</i> Aitch.            | 56 |
| <i>R. kokanica</i> Rgl.            | 42 |
| <i>Cerasus erythrocarpa</i> Nekski | 35 |
| <i>C. tianschanica</i> Pojark      | 22 |

**Table 1.**

Angren Plain: (Table 2)

| Plant species                                   | Square/ hectar |
|---|----------------|
| <i>Ferula tenuisecta</i> Eng.Kor.               | in thousands   |
| <i>Prangos pabularia</i> Lindl.                 | in thousands   |
| <i>Ligularia alpigena</i> Pojark.               | in thousands   |
| <i>Lagotis korolkovii</i> (Rgl.et Schmalh.)Max. | in thousands   |
| <i>Artemisia dracunculus</i> L                  | 60             |
| <i>A. persica</i> Boiss.                        | 18             |
| <i>Asparagus turkestanicus</i> M.Pop.           | 12             |
| <i>Festuca valesiaca</i> Yaudia.                | in thousands   |
| <i>Poa bulbosa</i> L.                           | too many       |
| <i>Verbascum songoricum</i> Schrenk.            | 18             |
| <i>Aconitum zeravschanicum</i> Stainh.          | 16             |
| <i>Geranium regelii</i> Nerski.                 | 18             |
| <i>Polygonum rupestre</i> .                     | 16             |
| <i>Cousinia franchetii</i> C.Winkl.             | 36             |
| <i>Cerastium cerastioides</i> (L.)Britt.        | 12             |
| <i>Arenaria griffithii</i> Boiss.               | 41             |
| <i>Aquilegia vicaria</i> L.                     | 19             |
| <i>Alchemilla tianschanica</i> Yuz.             | 26             |
| <i>Cobresia persica</i> Kuk.et Bornm.           | 39             |
| <i>Carex orbicularis</i> Meinsh.                | 28             |
| <i>Phleum alpinum</i> L.                        | 19             |
| <i>Potentilla gelida</i> CAM.                   | 32             |
| <i>Carex pseudo-foetida</i> Kuk.                | 29             |
| <i>Primula olgae</i> Rgl.                       | 18             |
| <i>Trifolium repens</i> L.                      | 38             |

**Table 2.**

In the Shakhimardan oasis of the Aloy Mountains, Uzbekistan has the only migraine herb (*Adonis chrysocyathus*), a source of cardiovascular disease. It has been found to contain essential alkaloids csmarin and strofantins. According to preliminary data, the area of this plant is 1,000 hectares, and due to the influence of further anthropogenic factors, the area of this important medicinal plant has sharply decreased and is now 300-400 hectares. *Physochlaina alaica* is the second unique and rare species of this mountain range in the Soh oasis and around Shahimardon and Yordon villages. At present, the area of this plant is also severely reduced. In addition, in the north of the valley (in Chatkal Mountains) two types of parphene (*Aconitum talassicum*, *A.zeravschanica*) are spread from important medicinal herbs. In addition, there are a number of beautiful plant species listed in the Red Data Book of Uzbekistan (*Tulipa ferganica*, *T.greigii*, *Eremurus robustus*, *Astragalus rhacodes*, which is an important gene pool).





**Figure 1.** *Tulipa ferganica* Vved.



**Figure 2.** *Tulipa greigii* Regel



**Figure 3.** *Eremurus robustus* Regel



**Figure 4.** *Astragalus rhacodes* Bunge

#### Figures 1–4 . Plants included in the Red Book of Uzbekistan

In addition, there are significant vegetation cover in the valley, including wild nuts spread in the well-known Arslanbob, Karaolma and Arkit ranges, as well as forests in Chatkal, Kurama, Alay and Fergana. Among the groups of plants that comprise these communities are several species of apple, pearl, hawthorn, barberry, rosemary.

Thus, the Fergana Valley has a rich and diverse vegetation cover, and, unfortunately, the ecological state of the flora, which is now our green treasure, is sad.

The flora is fragile and sensitive, and is quickly degraded by the influence of anthropogenic factors on them. That is why the reserves of valuable medicinal plants in the areas of Shakhimardan, Arslanbob, Karaolma and Soh have sharply decreased. Here end of the natural sources of three kinds of vermicelli (*Helichrysum maracandicum*) Dalachoy (*Hypericum perforatum*, *H.elongatum*, *H.scabrum*), blueberries (*Achillea millefolium*), lion (*Tailorus*) (*Leonurus turkestanicus*). To prevent this, monitoring is needed on a regular basis to monitor the flora. In this way, morphological and functional changes in plants are timely understood.

## Conclusion

To conclude, the nature and climatic conditions of the Fergana Valley dictate the distribution of the rich and diverse plant resources here. They include medicinal, essential oils, vitamins, tannins, fiber, honey and fodder plants, which need to be effectively used and protected.

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