Periploca: A soil stabilizing shrub that can grow in poor soils

Arid and semi-arid rangelands face increasing climate variability and grazing pressure as the world’s demand for food increases. ICARDA is introducing drought-tolerant species as a crucial means of assisting rangeland rehabilitation efforts, helping to conserve rapidly-depleting water resources and maintain grazing at sustainable levels. The result: a win-win situation for rural communities and the environment.

Periploca laevigata is an important shrub for grazing in the dry season. Although it contains tannins, it is palatable and is grazed mainly by camels, sheep, and goats. As this plant is able to grow in dry and rocky conditions in the poorest of soils it has good potential for increasing forage in dry areas as well as reducing erosion. The plant is also known for its many healing properties.

Periploca laevigata is promoted in many development projects - linked to soil conservation and sustainable water and forage usage across North Africa and the Middle East. This plant is found in places with hot temperate winters and mainly colonizes rocky substrates - it can grow in many different types of soil and is known to be found in the driest and poorest of soils. What makes this plant unique is that it is often found on steep slopes with scraps of calcareous crust, a condition that cannot support many plant species. It can grow up to three meters (m) tall and its root system develops according to soil depth. The leaves are evergreen but occasionally become deciduous under water stress.

As a result, the plant not only improves forage availability, but also helps to stabilize soil. Periploca’s distribution ranges from sub humid to Saharan climates, as well as warm and temperate microclimates. It most commonly inhabits areas with an annual rainfall between 100-400 millimeters (mm). However, the plant can also adapt to extremely varied hydric conditions, and has been found in areas with an annual rainfall below 50 mm. Periploca is also known for its medicinal uses and is exploited as a traditional medicine for diabetes, rheumatism, hemorrhoids, and gastric ulcers. Due to its many favorable characteristics it has been promoted as forage for camels, goats, and sheep.

Periploca benefits:
- Can grow in rocky soil with calcareous substrate
- Resilient, with well-developed root system
- Very drought tolerant
- Multiple medicinal uses
- Produces many seeds
- Stabilizes soil
- Dry matter intake for camel, goats, and sheep

Scientific name: Periploca laevigata Ait
Common names: Hallab, Aiton
Location: Arid and Semi-Arid Climates in the Middle East and North Africa.
Effective maintenance:

- Mix with other livestock feed because of tannins
- Harvest seeds when leaf color changes
- Implement grazing rest period during seed harvest
- Seeds should be air dried
- Seeds sown in October at 25 to 35 °C