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SOAPWEED

Soapweed (Yucca elata) is a perennial evergreen belonging to the Lily family. The stems vary from three to six feet in height, although some specimens as tall as thirty feet have been observed. The slender sharp-pointed leaves forming the green crown vary from one to two feet in length, and although they die after the second or third year, they are persistent on the stem. The soapweed annually produces a lateral expansion of the stem, an unusual phenomenon for a member of the Lily group.

Yucca is found through southern Arizona and New Mexico to western Texas and into old Mexico. It commonly occurs on sandy soils of grama grass range. The number of plants may vary from a few up to about three hundred per acre. The soapweed is regarded by stockmen as a valuable forage plant, since cattle may often graze almost entirely upon the green leaves during the spring months when grass is short. The tender flower stalks and flowers are eaten with considerable relish by cattle, while the succulent stems and leaves were chopped for ensilage and used extensively in southern New Mexico for supplemental feeding from 1916 to 1919. The plant is a desirable ornamental shrub, but is rather difficult to transplant.

The soapweed stem and leaves contain abundant fibers of potential economic value. The fibrous strands laid down by the growing point of the stem are much branched and are continuous with those of the leaves. The older stem makes a small annual addition of straight fiber lateral to those produced by the growing point.

When winter and early spring rains are abundant, the majority of soapweeds send up flower stalks from three to five feet long which in four to six weeks after starting, produce great panicles of large cream-colored flowers, usually in full bloom during May and June. Very few of the flowers produce seeds, but there are often a few large pods on each flower stalk which shed hundreds of matured seeds during the autumn and winter. In germination tests made from seed collected on the Jornada Range Reserve since 1925, the viability varied from 51 to 99 percent, with a variation as great as thirty percent for seeds taken from two different pods grown the same year. Only a small number of seeds ever produce new plants, although a large number of seedlings were observed on the Jornada in 1926. Most of the seedlings started that year are still alive in 1929, but even now they have only ten to fifteen small leaves, and will need a good many years to resemble greatly the familiar mature soapweed.

It is quite common for old soapweeds to produce young sprouts from underground, and from one to five or more new stems may spring up if the old plant is cut down. The sprouts grow faster than seedlings for the first few years, but none of the plants grow very fast. From measurements made since 1925, the growth of sprouts and of mature plants may vary from one-half to two inches per year, so that a soapweed five feet tall might easily be fifty years old. Plants near roads or other places where moisture is more abundant seem to grow slightly faster than ordinary soapweeds on the range. All Yucca plants must contend with rodents, which gnaw the green leaves or cut them off close to the stem.

Since soapweed is such a slow-growing plant, any plan for its continued use should provide for cutting only the plants above a certain size, say three feet or more, which would leave enough plants on the ground to maintain a good stand, and protect the area from excessive wind erosion. Indiscriminate cutting of all plants would probably necessitate a period of at least 25 years before a second cutting could be made over the same area, but with a selective cutting practice in effect, a ten- or fifteen-year cycle for removing the larger soapweeds should prove satisfactory.

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