

2147. "French-grown Royal." See No. 2148.  
 2148. "Russian Improved Royal." A spring flax, like Riga flax, but maturing seed without noticeable deterioration of the fiber, which is fine and silky and is employed in Belgium for the finest fabrics. Rather late, white-flowered. Seed from Russia.  
 2149. "Yellow-seeded flax." A North American variety, grown also in Ireland. Yields more fiber and seed than No. 2140, and produces a paler oil.  
 2150. "Winter flax." "This variety is the best for seed, but its fiber is of inferior quality. It is rather tender in the north of France. It may be sown in spring also." (*Vilmorin.*)

**2151. PINUS PINEA FRAGILIS. Stone pine.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

Thin-shelled piñons are produced by this variety.

**2152. SYMPHYTUM ASPERRIMUM. Prickly comfrey.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

A coarse, rank-growing, perennial herb, with purple flowers in nodding, one-sided clusters, and large, rough leaves. It is a native of the Caucasus. It has been extensively tried in this country. Although it will produce a great bulk of forage on rich or swampy soils its cultivation is not recommended. Prickly comfrey does not compare with the clovers, alfalfa, or cowpeas in feeding value, and where the latter can be grown it is not advisable to plant it.

It is propagated from the roots. These are set out in rows  $1\frac{1}{2}$  to 2 feet apart, the plants 16 to 20 inches apart in the row. At first of slow growth, prickly comfrey will in the course of two years yield from 3 to 6 tons of cured forage per acre. It has been recommended for waste, swampy lands in Florida.

**2153. CYTISUS PROLIFERUS ALBUS. Tagasaste.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

A shrubby, perennial legume with silvery gray leaves. It is a native of the Canary Islands, and has been recommended as a forage plant for hot and dry regions. It has proved successful in Algeria and South Australia. The seeds should be soaked 24 hours in warm water to aid germination. They are then planted rather thickly in a seed bed, where they should remain a year to get well rooted. The 1-year-old trees are transplanted to the field where they are to remain, being set in rows 6 to 8 feet apart, and are cultivated until they are 2 or 3 feet high. At the end of 3 years cattle or sheep may be turned into the field, and the tagasaste will require no further treatment except to be topped 5 or 6 feet from the ground to prevent it growing too tall. The leaves and twigs are nutritious. Cattle and sheep are said to fatten rapidly upon it. When once firmly established tagasaste will withstand any amount of drought, and for that reason might be profitably introduced into the arid Southwest.

**2154. TRIGONELLA FOENUM-GRÆCUM. Fenugreek.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

An annual legume, highly esteemed in Algeria as forage for fattening cattle. It has a rank, characteristic odor, which prevents its use for milch cows because of the odor and flavor given to the milk. Under irrigation fenugreek grows 2 to 3 feet high. The seeds are used in condition powders. The seed is sown in autumn or early spring at the rate of 15 to 20 pounds per acre, and the crop is ready to cut when the flowers appear. For trial in the Southwest.

**2155. LATHYRUS SATIVUS. Bitter vetch.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

A native of middle and southern Europe, which is adapted to cultivation in warm climates. The fodder is superior to that of vetches, but the yield is less. In India it is grown as a winter crop, often on heavy, clayey soils which will grow no other legume. Great caution must be used in feeding the seeds of this plant, as they are said to contain an alkaloid which is poisonous to domestic animals and to man. It is much cultivated in the Mediterranean regions.