## Caterpillar

Silkworms and their valuable creations - cocoons made of a

mixture of protein coated with sericin, a gummy substance -

fill a frame at China's main agricultural research center in

Jiangsu Province. Native home of the mulberry silkworm,

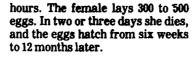
China has nearly 300 varieties and supplies more than half of

the world's constant demand for silk.

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coated with a gummy substance. This liquid silk becomes the fiber for the worm's own shroud

Inside the waterproof cocoon, the silkworm pupates and in two weeks turns into a moth. The moth emerges and mates for several



## **Cocoons Hand-washed**

But this is only the beginning of this labor-intensive industry. To soften the gummy coating on the silk fiber, women in China soak the cocoons in hot water. Then they can unravel the threads. Young girls in India spin silk by drawing fibers from pierced cocoons and twisting the strands across their legs.

Thirty-five countries produce silk, but their combined production adds up to only 0.2 percent of the world's total production of textile fibers. China, India, the Soviet Union, and South Korea are the leaders.

Silk initially spread from China to Rome by way of the Silk Road. By the 13th century Italy had become the silk center of the West. Muslims carried silk across North Africa to the Iberian Peninsula.

The United States began manufacturing silk products in the early 1800s and by 1915 was the biggest importer of silk, mostly for stockings. But World War II, which diverted silk for military uses, helped turn silk stockings into luxury items.

## It's time for frost-crack seeding

FLEMINGTON, N.J. - "Frostcrack" seeding could just be the answer to improving a thin pasture stand or hay crop. This method of seeding, timely in the last two weeks of February and up to about March 15, can be successful for some kinds of plants, namely clovers and many of the grasses.

Forage stands, especially pastures, can thin out, often caused by grazing patterns and animal traffic.

"Frost-crack" seeding is nature's way of re-seeding. Seed is applied before ground thaws. The early spring freezing and thawing results in cracks and crevices in the soil surface, admitting the seed. Germination then occurs early in the season. Seedlings can be established before hot weather arrives

Not all forage species can survive the low temperatures which may occur. Frost seeding alfalfa is not as successful as for clovers and most of our grasses.

Traditionally, farmers in this area have used frost-crack seeding in establishing red clover in winter wheat. Wheat is planted in fall, usually last week in September and into October. The crop develops good growth in late fall. Clover seed is broadcast in late February, early March. It falls on bare soil between the seven-inch rows and wheat.

Years back a farmer used a wheel-barrow seeder for this operation. Ever see one? It's a onewheel device with handles like a wheel-barrow. A long seed box, perhaps 12 or 15 feet in length, was attached to the handles, over the wheel.

Simple construction, and it worked.







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