Black jack (left) compared with *Erodium* (right). The similarity of the awned seed has often led to *Erodium* being miscalled black jack.

**Damage to Pelts**

The value of pelts depends very largely on the condition of their grain side—the side on which the wool grows—and while good, clear-grained pelts will process into many kinds of fancy leathers such as glove leathers, etc., faulty-grained pelts have to be used for cheaper basils and linings. *Erodium* seed, with its hygroscopic awn, often screws its way through the wool and the seed itself becomes embedded in the grain of the pelt. Even after the elaborate chemical treatment for removal of the wool and subsequent liming, fleshing, bateing, and curing, a large proportion of seed remains embedded. This breaks the grain and thus ruins the pelt for any of the better grades of leather. On many lamb pelts there are hundreds of seed holes, and though no actual infection or sores might have been apparent on the lambs, the retarding effect of irritation and discomfort to growing animals must have been considerable, for though the seed does not completely penetrate the pelt, as is the case with barley grass, it penetrates the grain and remains embedded between the grain and flesh side of the skin.

**Spread Must be Watched**

Though the full extent of the trouble caused to the sheep and wool industry by *Erodium* and its seed may not be readily apparent to fat lamb producers, an inspection of affected lambs' wool and damaged sliped pelts from lambs from *Erodium*-infested pastures would be instructive. The growth of *Erodium* no doubt has been assisted and the effect of the seed aggravated as a result of breaking of swards during a succession of dry seasons, but any spread of a weed of this nature must be watched closely. Though the full extent of the damaging effect of this seed to the woollen industry is still a matter of conjecture, wool containing this seed is graded "carbonising" and devalued accordingly.

On much of the Maraekakaho and Tikokino country in Hawke's Bay *Erodium* tends to take charge; it often dominates sowings of better grasses, particularly when the latter have not established well. *Erodium* then takes charge and ultimately fattens the stock.

Whatever virtues *Erodium* may possess must be weighed against its disadvantages and even if the weed does fatten stock in dry periods, allowing it or encouraging it to dominate may prove a very costly business, as with its coiled, spiral awn *Erodium* seeds readily and is easy to pick up and transport.

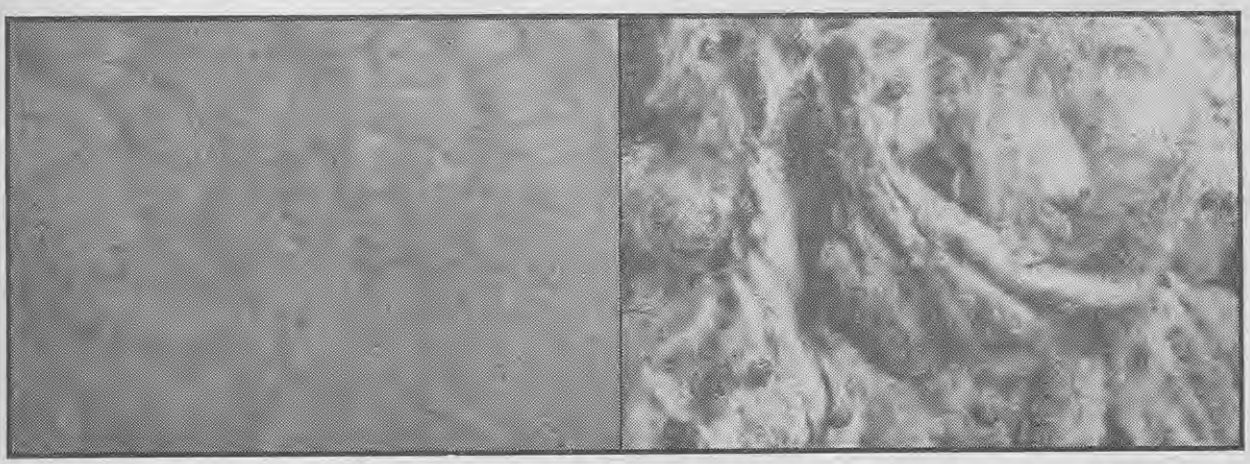
It would appear that on heavily-infested *Erodium* areas the best method of attacking the weed is by sowing of suitable pasture mixtures and by building up the fertility so that an unbroken sward of increasing density is provided.

## Barley Grass

Barley grass (*Hordeum murinum*) is a troublesome annual weed on many farms. Its barbed seed head possesses remarkable penetrating ability which, irrespective of its natural advantages as far as its reproduction is concerned, can be a direct menace to stock and a continual worry to farmers. The seed has long, sharp awns which make it like a barbed spearhead and allow one-way movement only. The sharp projections on the awns act as stops —ratchet fashion—and any movement forces the seed forward. This injurious penetrating ability results in considerable damage to stock and a corresponding loss to farmers each year.

**Damage to Pelts and Stock**

Barley grass seed punctures can result in severe septic wounds in stock and when sheep graze on infested country the barbed seed becomes attached to the wool and often travels inward, completely penetrating the skin. The seed is considered a menace in freezing works and fellmongeries, as it is responsible for considerable annual loss (both in the returns from



Left—The grain side of a sliped pelt showing embedded *Erodium* seed and damage to pelt quality. Right—Subterranean clover seed in half-bred belly wool.