

INDISCRIMINATE BURNING BY FARMERS

(continued from previous page)

rain, the idea being that the rain would quickly make the tussocks grow again and put the fire out before it spread too far. This reasoning is, of course, entirely wrong, because no amount of rain can completely restore a hill-facing tussock that has been burnt in the dry state, since the tussock base and the ground in between have been burnt. Nothing can justify burning when the tussock base is dry. Many hill men burn during the correct months, but without any regard to soil and tussock dampness, a vital point to which little or no consideration has been paid in years gone by. During my 22 years' experience in both wet and dry climates, ranging from 50 inches to 17 inches of rain per year, I suppose I have made as many mistakes as most men over burning, and from these sorry experiences have now come to the conclusion (after various experiments), that there are certain definite rules that should be followed when burning.

But first of all, let us consider the pros and cons of burning from the sheep man's point of view:

FOR BURNING

1. *Protection Against Accidental Fires.*—Accidental fires may occur during a drought, destroying many tussocks beyond recovery, and the grasses between them. There might also be a large loss of sheep. Fire breaks should, therefore, be burnt where considered necessary.

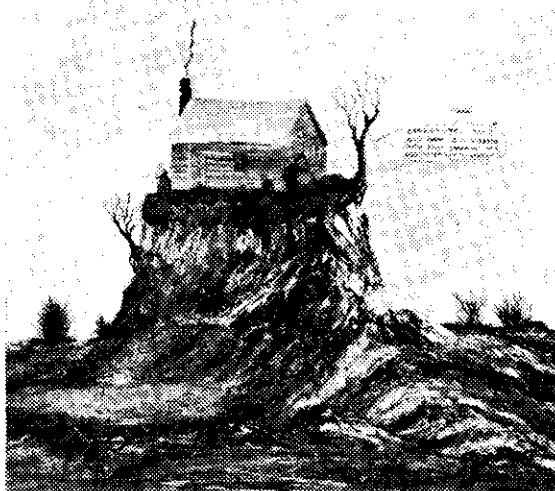
2. *Improvement of Unpalatable Tussock.*—Burning does achieve this, but at a cost. In addition to the erosion risks, if there are any rabbits in the vicinity, they will flock on to the "burn" and eat the tussocks right out. Overstocking will do almost as much damage. If tussock base and ground surface are not

really damp when burnt, the resulting damage far outweighs any temporary feed obtained. From this latter paragraph should be formed the one great law that every hill-man should have in mind when considering controlled burning. The burning law should read something like this:

"During the months of August and September only may burning be done, but never later than two days after rain if the sun has been shining during that period. If overcast conditions are continuous, it would be safe to burn up to a week after rain."

"In cases of doubt, some tussocks should be left, the bottom third of which should be very damp and the ground between also damp. If there is a nor'-wester the day after rain, burning must not be done later than that one day. A 'rain day' for burning purposes should be one in which not less than 20 points of rain have fallen."

I should think this rule could be applied from Marlborough to South Otago with rainfalls of up to 35 inches per annum; for wetter areas the rule could be modified a little.



A CARTOON used in America to warn farmers that if they don't do something about erosion control, they will wake up some morning to find themselves in the position of this farmer, who is complaining "Erosion, you say? All I know is it started with Emmy throwin' her dish water out of the window"



EXAMPLE FROM AMERICA: What 200 years of farming will do where the soil is not protected against erosion, can be seen on this farm in South Carolina

3. *To Facilitate Mustering in Snowgrass.*—This reason is not good enough. Snowgrass should never be burnt for any reason other than that of fire risk, and even then as sparingly as possible. Snowgrass is not found on sunny facings below about 2500 feet, and, of course, the rainfall down to this level is very much heavier in proportion to the rainfall at lower levels, therefore, the leaching of the soil above this level is very much greater than below. Imagine the sorry state of a beautiful snowgrass, covering an area of perhaps 20 or more square feet, suddenly shrivelled by fire to a small black hummock surrounded by barren yellowish earth. A golden opportunity for erosion to start its work.

Unlike ordinary tussock, snowgrass is edible without being burnt. Besides, if sheep are feeding at the higher levels when caught by snow, they can't exist on burnt-out snowgrass. Even in deep snow sheep can live for three or four weeks without undue weakening if snow catches them on a good thick area of snowgrass. Experience has also taught me the fallacy of lawyer-bush burning. The young shoots that grow after burning will catch hoggets more easily than the "old man" variety, which usually has a large amount of dead wood below, with the young shoots well above the sheep's heads.

AGAINST BURNING

This is the case against burning:

1. Decayed and decaying vegetable matter is destroyed.
2. Native grasses between tussocks are destroyed and weeds take their place.
3. Vast amounts of nitrogen are destroyed.
4. Erosion starts before vegetable matter can again be built up.
5. The country is unable to resist drought.
6. Burnt snowgrass increases snow risk.

The above points require no further explanation.

"There Should Be Laws"

Hill men should treat burning-off as the most important operation of the year, of even greater importance than shearing and lambing. Indeed, the subject is of such importance that not only must we re-adjust our minds to this matter, but laws should be drafted to regulate the few who never listen to reason. Anyone lighting a tussock fire out of season should be heavily fined. Everyone should consider it his duty to inform the local stock inspectors of such fires. Nor should fires ever be lighted except by the owner or manager.

It should also be urged that every run-holder has a rain gauge, so that he will know exactly when to burn. The divergence of opinions as to the amount of rain that has fallen, especially overnight, is amazing. It does not take long for a hill-man to judge how much rain he should add to his rain gauge reading for the country on which he intends to burn. For instance, on this place (Hakataramea), a reading of 20 points at the house means about 26 points on the hills 500 feet above, and two miles away. At 1000 feet it would be proportionately heavier, about 34 points.

[We hope to be able to print a second article by Mr. Tripp dealing with some suggested solutions of this high-country problem.—Ed.]

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