

## Overgrazing by Illegally Occupied Rangeland and Law of Rangeland

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Farmers are allowed to cultivate their owned farm land. Rangeland which belongs to government is originally allowed to be used for common grazing. But it is said that farmers had started to attack rangeland to be occupied illegally for using as their private cropland in 1950—60's, because of technological improvement such as switch from animal drafting to tractor power. Farmers became able to cultivate more lands by using machine power. However, this attacking stopped in 1970-80's, because (1) there is no more rangeland left which can be converted to cropland, (2) government started to watch these illegal activities more strictly in 1970, (3) village authorities tried to stop attack by village control such as establishment of watchman, planting pine trees on rangeland, or digging long hole on the border of rangeland.

It is estimated that area of rangeland is 21 million ha which occupies one thirds of whole Turkey. 5 million ha of rangeland belongs to Ministry of Treasury and 16 million ha belongs to Ministry of Agriculture. This means that rangeland should be owned by the state. However, 30-40% of rangeland is illegally occupied by farmers' attacking to be used as cropland and only residual 60-70 % can be actually used as rangeland for common grazing.

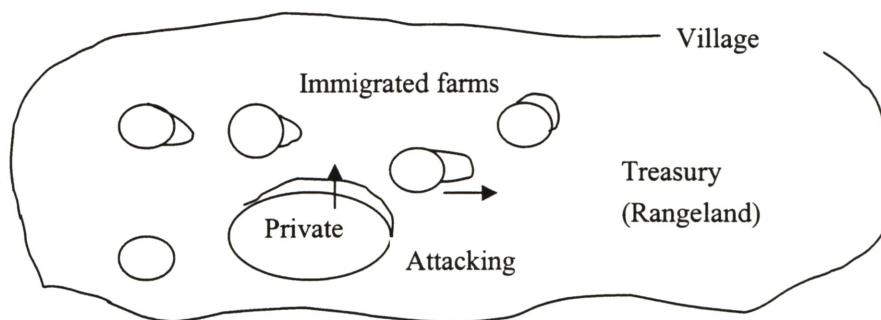


Fig.1 Image of illegal occupation of rangeland

This illegal occupation causes reduce of the area for common grazing and induces overgrazing problems. Though the area for common grazing is decreasing, farmers need to feed animals certain amount of grass. This makes farmers start to bring animals to rangeland much earlier than the optimum season. They begin to graze animals just after snow has melted (around 15 Feb). But this date is too early for the grass to grow better. Once growing point of grass has been eaten by animals, grass loses the power to grow up well since then. The demand of animals are increasing nowadays, but smaller area of rangeland and low level of grass production can not balance between supply and demand of animal products.

In order to increase of animal products supply and make a balance between numbers of animals and volume of grass on rangeland, 'law of rangeland' was enacted in 1998. The tasks of this law are as follows. (1) To specify the boundary between private cropland and treasury rangeland. (2) To confiscate illegally occupied rangeland by the state from farmers. (3) To implement the project for improving productivity of rangeland. Government subsidize fertilizer and seeds to reduce deterioration of rangeland, that is, overgrazing. (4) To give the authority to a community to govern rangeland by themselves. But enforcement of the law, especially confiscation is very difficult. Only 10% of rangeland has been able to be impounded.

It is concluded from this overgrazing problem that human opportunistic behavior is strongly related to natural resource conservation.