# Allan Savory: Myth And Reality

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<http://www.thewildlifenews.com/2013/11/12/allan-savory-myth-and-reality/>

**Savory: Livestock grazing can reduce Green House Gases and reduce global warming.**

**REALITY:** One of Savory most recent claims is that grazing will stimulate the translocation of carbon from the atmosphere to the roots of plants, thus increasing domestic livestock numbers and grazing, Savory asserts, will significantly reduce global GHGs. While it is true that significant amounts of carbon are stored in the soils of rangelands, the ability to capture and transfer additional atmospheric carbon to grassland soils is very limited. Most arid grasslands have low productivity, thus low ability to store new sources of carbon.

Furthermore, a full GHG accounting would demonstrate that domestic livestock are among the largest source of global GHG. Methane emissions from domestic livestock, particularly cattle, are considered one of the largest sources of global GHG. Livestock also emit nitrous oxide that is even more potent as a greenhouse gas. Together these emissions are considered by the United Nations Food and Agricultural Organization to be responsible for up to 18% of global GHG.

 Even worse much of the livestock pasture around the world has been created and continues to be created by the destruction of forests which results in the release of even more carbon into the atmosphere. The replacement of forests with grass pasture thus increases overall carbon emissions. According to a recent review by World Watch Institute utilizing this full accounting system  livestock production may be responsible for as much as 50% of all global GHG. Thus a reduction of domestic livestock numbers would go much further towards reduction of global atmospheric carbon than any small amount of carbon which might be sequestrated as a result of growth from grasses related to livestock grazing.

**Savory:** **Domestic animals like cattle are merely replacing herds of native species like bison that once roamed grasslands.**

**REALITY**: There are substantial evolutionary differences between domestic animals like cattle and native species like bison. Bison naturally move more frequently than cattle. They are better at defending themselves against native predators. They can exist on lower quality forage than cattle.

Furthermore, most  of the American West did not have large grazing herds of bison and/or other large mammals. For instance, bison were largely absent or found in very small numbers west of the Continental Divide. Most of the Great Basin of what is now Nevada, western Utah, southern Idaho, southeast Oregon historically did not have large herds of grazing animals, nor did Arizona, much of California, Oregon and Washington.

**Savory:** **Plants need to be grazed and benefit from livestock grazing.**

**REALITY:**Savory mixed up compensation with need and an economic value with a biological one. The grazing of a plant **harms** the plant, especially if the cropping occurs during the growing season. Plants can compensate for this loss but often do so  at a cost to their overall fitness. Grazing the top of a grass means that the bottom or root of the plant will compensate for it but only with a loss of capital and root mass, weakening the plant that now needs rest from grazing.

The loss of photosynthetic material (leaves) by grazing causes a plant to respond by translocation of energy from roots or other parts of the plant to build new leaf material—assuming there is sufficient moisture, nutrients and other critical elements available to recover from the grazing event.

Thus cropping may result in greater overall biomass production as plants seek to compensate for their loss of leaf material. However, the production of more above-ground biomass is often done at the expense of other important plant material including a reduction in root growth, loss of reproductive effort (the plants expends energy on leaf production instead of seed production), and so forth. It is hardly a “benefit.”

To characterize compensation from a harmful event as a need is analogous to suggesting that shooting and poisoning of coyotes is a “benefit” to coyotes because they compensate for these losses by producing additional pups.

**Savory**: **Most rangelands suffer from “overrest” not overgrazing.**

**REALTY:** Overgrazing is the cumulative effect of multiple cropping of plants that leads to a decline in plant energy reserves, reduction in root mass, seed production/reproductive effort, and is often accompanied by soil erosion and overall changes in plant composition on a site. In the absence of livestock grazing, plants recover energy reserves, seed and reproductive effort typically improves and soil erosion is reduced. There are no documented examples of “overrest”.