

Disturbances

Always Harmful Avoid

- **Herbicide / Fugicide** (incl in hay)
- **Chemical Fertilizer** high doses
- **Continuous Grazing**
- **High Temperature Burning**
- **Destroying Soil Profile**
- **Genetically Engineered Organisms** (GMO seed)
- **Extended Flooding** of soil profile – likely causes anaerobic conditions
- **Pesticides** (chemical fly control, chemical wormers)
- **Biosolids** – often too bacterial dominated, so selects for weeds. Likely contains undesirable or harmful chemicals

Likely Harmful Use Rarely Not Necessary

- **Tillage** (use only in very specific instances – not as a way of regularly maintaining your system)
- **Chemical Fertilizers** low dose
- **Organic Fertilizers** (still trucked across the country and often from extractive mined sources)
- **Lime / Gypsum** (add to compost instead)
- **Burning**
- **Wood Ash**
- **Routine Mowing** is harmful to diversity, ultimate productivity and also to your pocketbook, especially if residual less than 8".
- **Overwatering** – likely causes compaction. If your soil needs watering it lacks good biology and organic matter
- **Equipment traffic**

To Learn More:

Grow-Your-Soil.com

GrazingPower.com

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Potentially Positive Use Wisely

- **Grazing** where you stomp more than you take off the plant – graze less than 30% trample 70% or greater of plant
- **Animal Impact** even animals walking over and lying down on land can improve it, as they turn up seeds to germinate that were deeper into the soil profile, urinate and dung to feed microbes, push plant material down where the microbes can feed, drop hair, saliva and milk foam to increase soil life, and add kinetic energy to the earth that stimulates life. By bruising the plants they stimulate the plants - much as exercise positively stresses your muscles...to grow stronger and to become more active, healthy and productive.
- **Rest** – can be positive if recovery timed with appropriate disturbances – or harmful to productivity and fertility if left too long (over-rest)
- **Feeding Hay** without herbicides and tromping it down less than ½" thick when compressed
- **Adding Biology** using compost or other microbial sources like compost tea or extracts - IF your system severely degraded AND you have identified what you need AND you have a plan in place to support their survival
- **One-time Mowing** – not nearly as good as grazing, and not often recommended, but in certain cases may be an option to put plants back into a vegetative state or set back weeds before seeding or choking out desired species of forage. The higher the residual left the less harmful. Sometimes done to prepare land for over-seeding or set back an undesired species.