Step 1: The problem

Cattle release too much methane

Step 2: Define success

50% decrease in methane produced by cattle

Constraints

Hard

* decrease methane – must decrease methane
* laws – must be legal
* possible to make – must be physically possible to make
* good for the environment – must be better for the environment
* safe for human consumption of cattle products – must be safe to eat cattle products

Soft

* ethics – try to be ethical
* cost – try to be as cheap as possible
* maintenance costs – try to lower maintenance costs
* quality of cattle – try to maintain same quality of dairy/beef from cattle
* quickly setup – try to be implemented asap

Step 3: Find Solutions

* feed additives

feed additives – lower methane by upto 40%, some say over 80%, including carbohydrates and unsaturated fat and increase feed efficiency. Aswell as being toxic to methane producing microbes in cattle rumens. Takes affect immediately with no lasting affects on cow, no negative impact on cattle welfare or performance