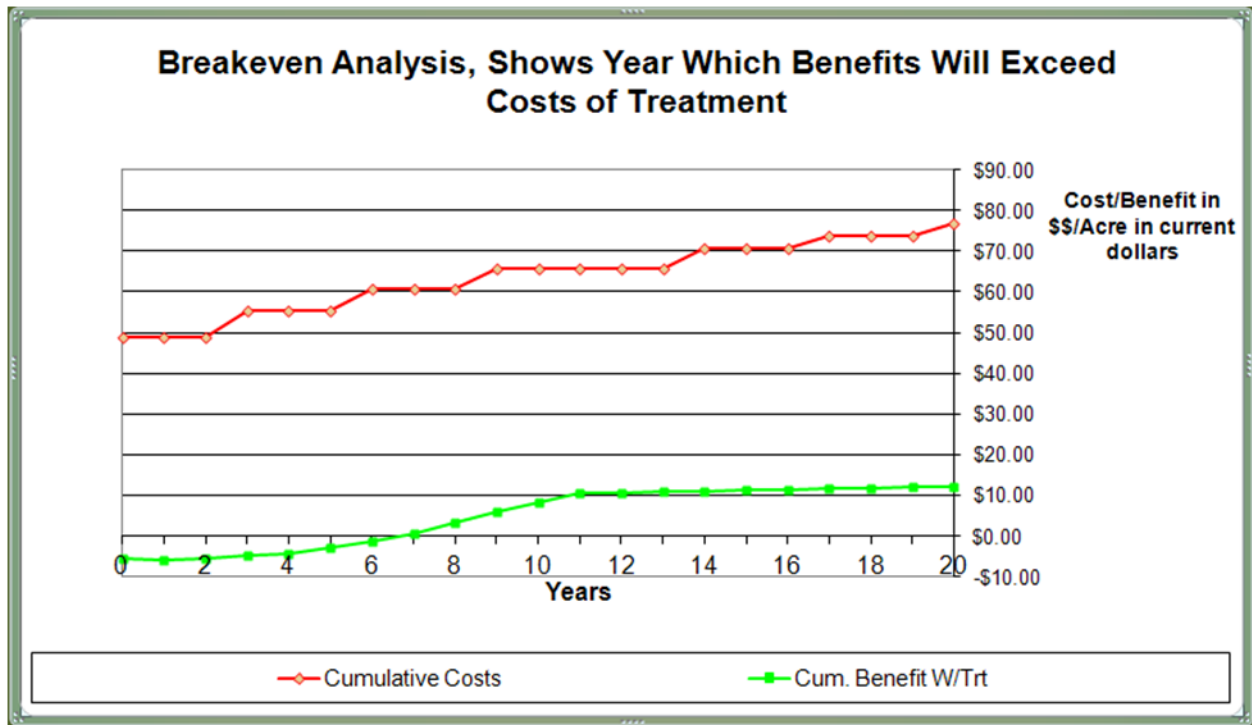


# Annual Grass Management *Cost/Benefit Analysis*

## Example Scenarios

### Example 1

In this scenario, the range had a medusahead infestation that consisted of seventy percent of the biomass. The strategy used to control the infestation was to use a “one pass” system to both spray the weeds and seed the area with HyCrest perennial bunchgrass and Sandberg’s bluegrass. With this strategy, the medusahead was reduced to only forty percent cover after the initial treatment and over time was reduced to eighteen percent by continued spot herbicide applications every three years. The improvement away from a near medusahead monoculture caused the system to gain a hundred pounds of biomass raising production to 1100 pounds per acre. In this scenario, grazing is deferred the year of the reseeding.

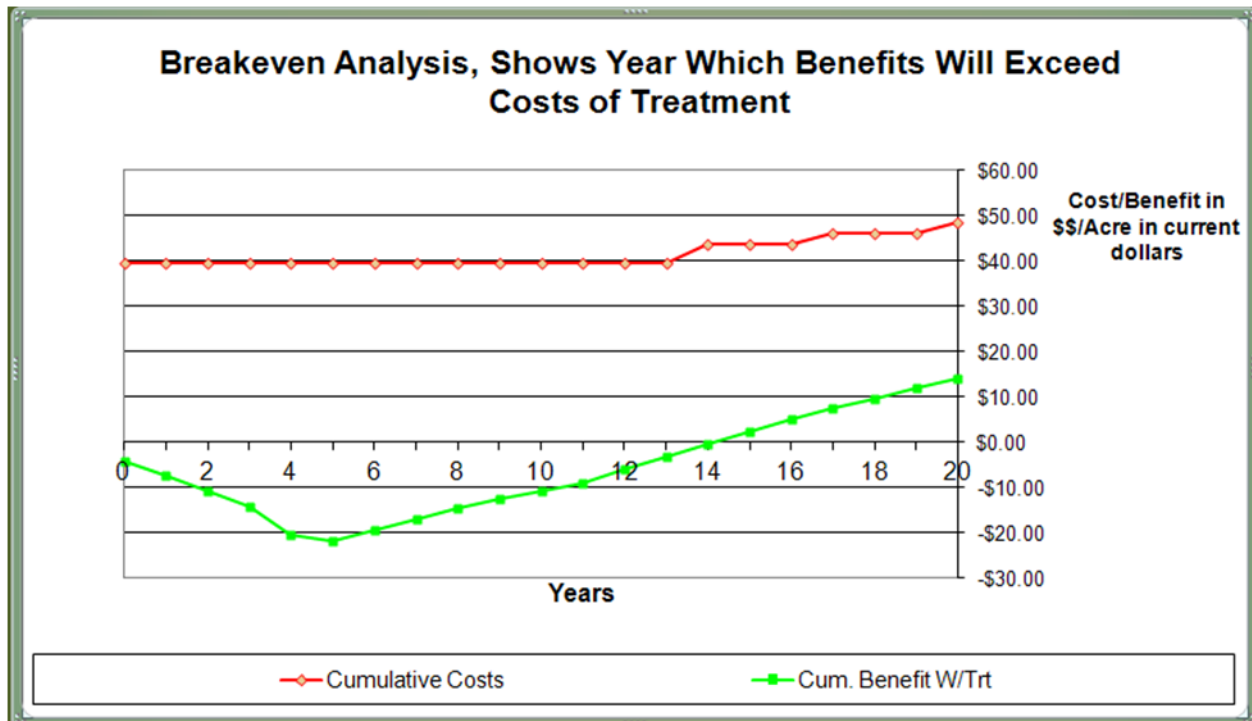


### Conclusion

In this scenario, the cost of treatments always outweighed the benefits and ultimately the loss would be about \$67 per acre after 20 years.

## Example 2

In this example, we start with a 100% medusahead monoculture and spend the first 3 years grazing heavily in order to reduce the seedbank of medusahead seeds. This caused a 100lb or 10% biomass reduction in medusahead each year. On the fourth year, after the seedbank was depleted, we reseeded with HyCrest crested wheatgrass and Sandberg's bluegrass and did not graze that year. Light grazing was done the following year and movement away from the monoculture caused a 200lb biomass increase in total biomass (from 1000 to 1200 lbs/acre). The medusahead was reduced to only 10% of the biomass for five years, however from that point on, the medusahead started to reestablish at a rate of about 10% a year.

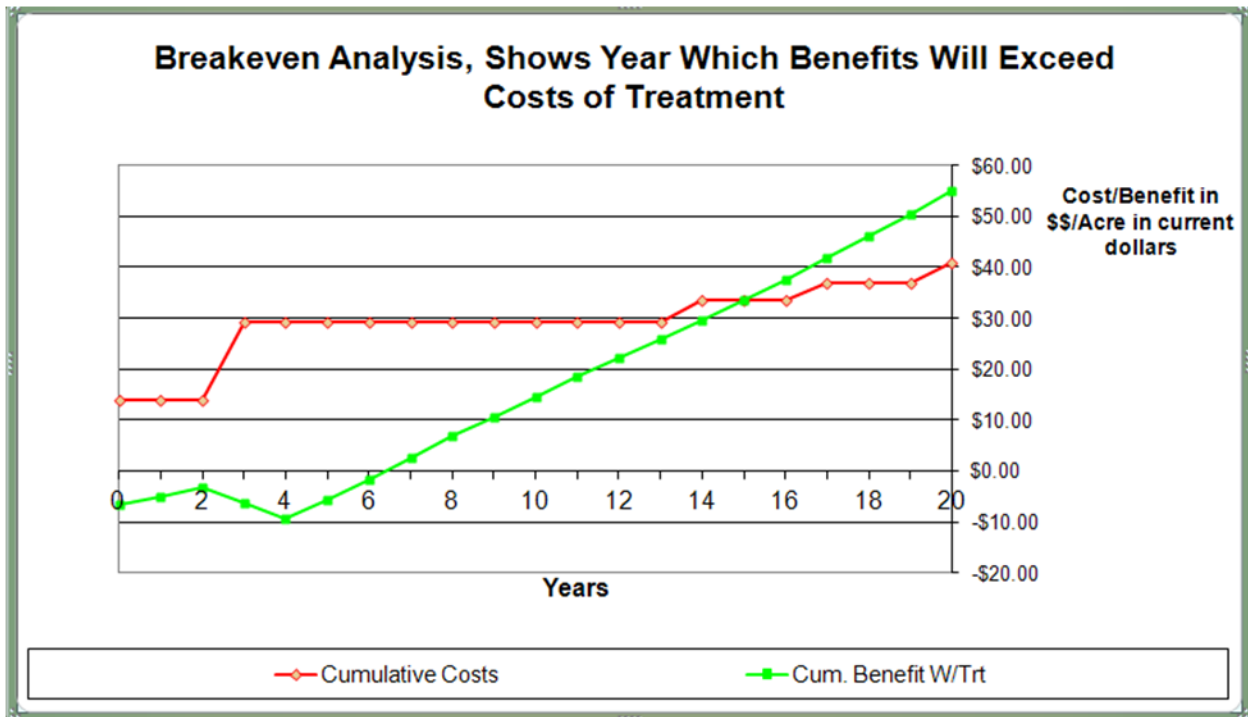


### Conclusion

In this scenario, the cost of treatments always outweighed the benefits and ultimately the loss would be about \$35 per acre after 20 years. A major loss in benefits occurred during the first 5 years because of the loss of weedy forage during that period. As desirable forage improves, the benefits begin a positive trajectory.

### Example 3

In this case, we began with a moderate infestation where 40% of all biomass consisted of undesirables. We used a helicopter to spray the infestation and reduce it to around ten percent, resulting in a ten percent gain in biomass. The helicopter spraying was repeated two years after the first application and after both applications and grazing was reduced that year. After five years the undesirables started to return and spot spraying was needed in order to stop the infestation returning to original levels.



### Conclusion

In this scenario, the management provided enough new revenue to pay for the costs of treatment by year 15. After 20 years, this management strategy returned \$15 per acre.

