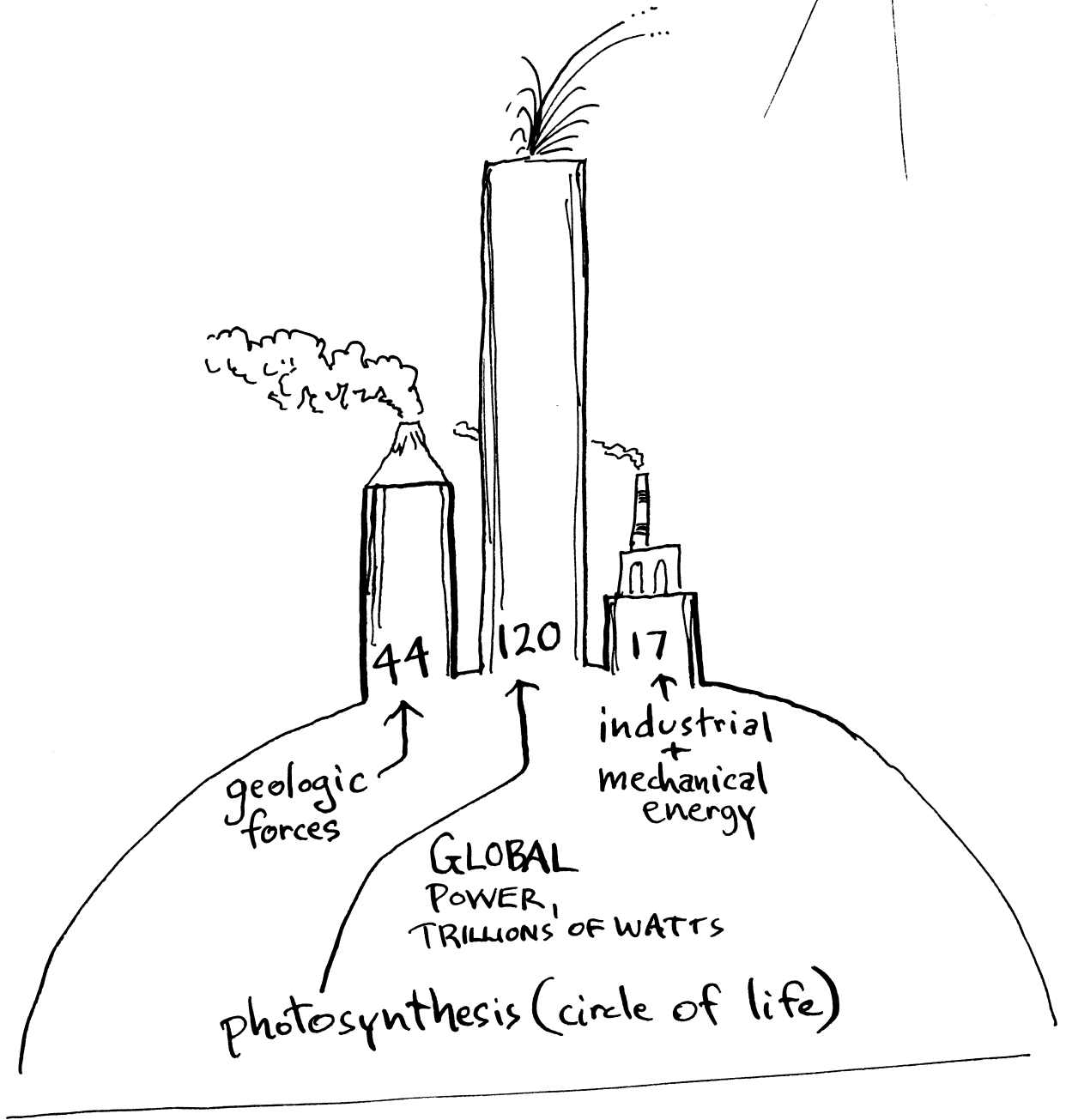
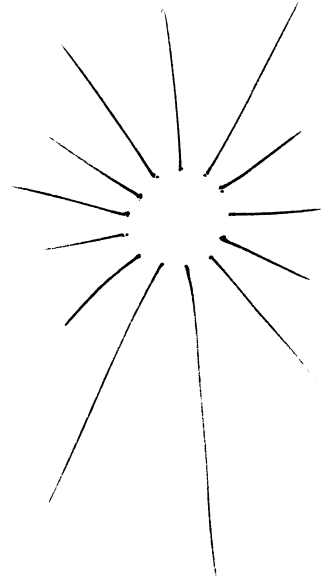


RECOGNIZING THE BIG FORCE

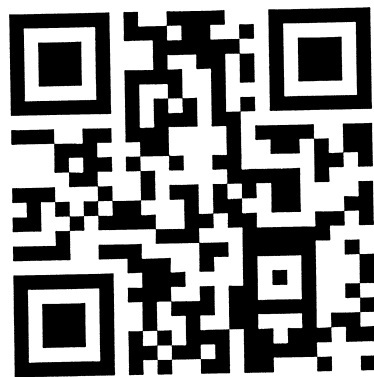


by Peter Donovan

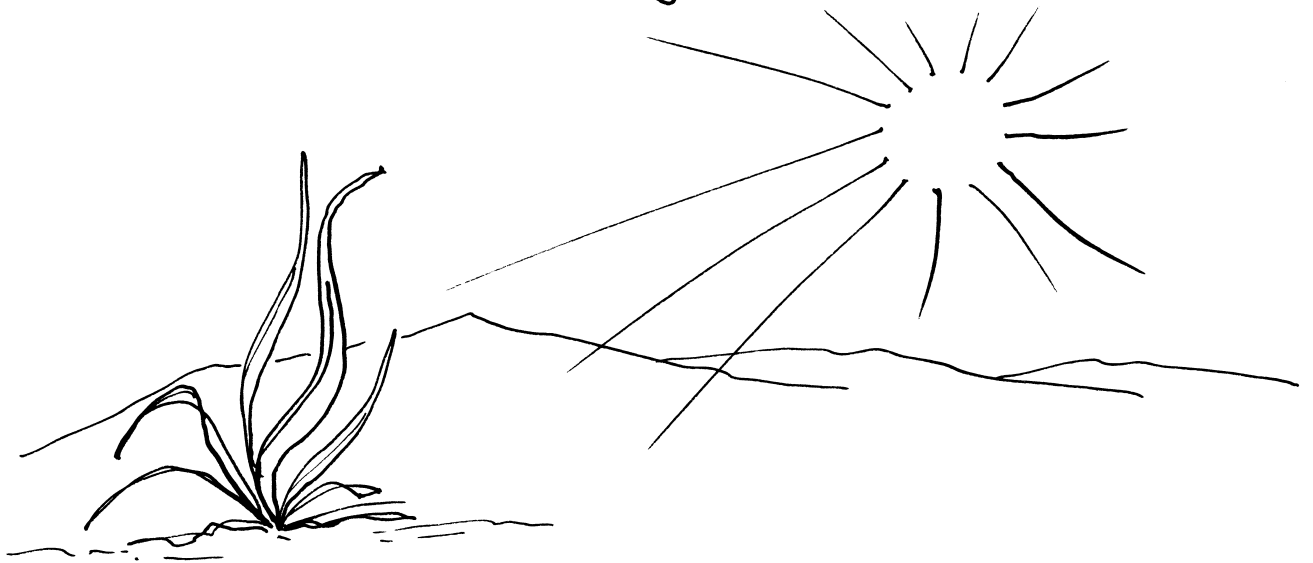


Learning to recognize, imagine, and work WITH the circle of life, the most powerful planetary force — this is the greatest opportunity in agriculture today. For shared, participatory learning with open data, see

soilcarboncoalition.org/atlasbiowork

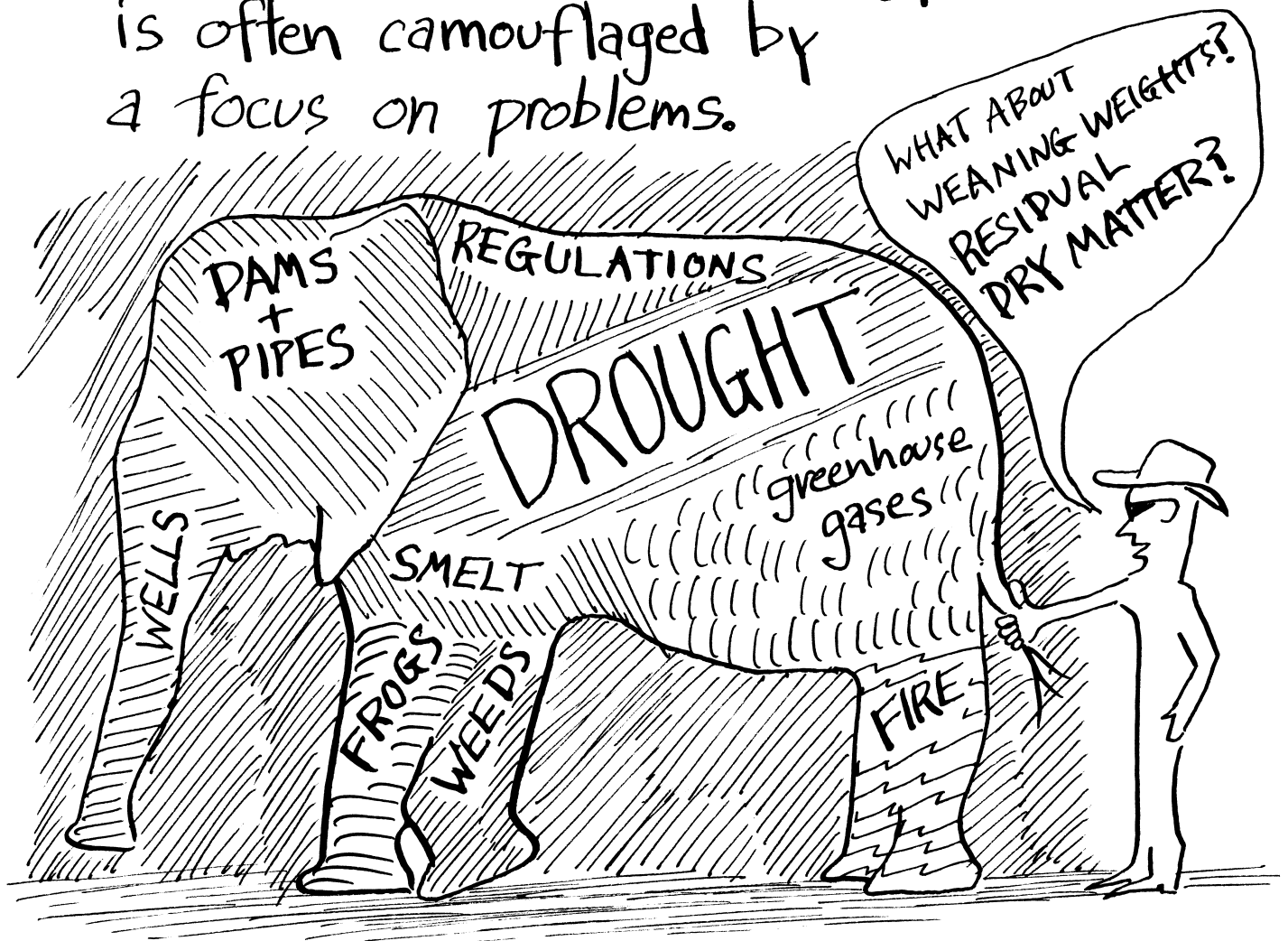


The viability and success of a ranch or farm — and of civilization itself — depends on how we capture and manage the flow of sunlight energy.



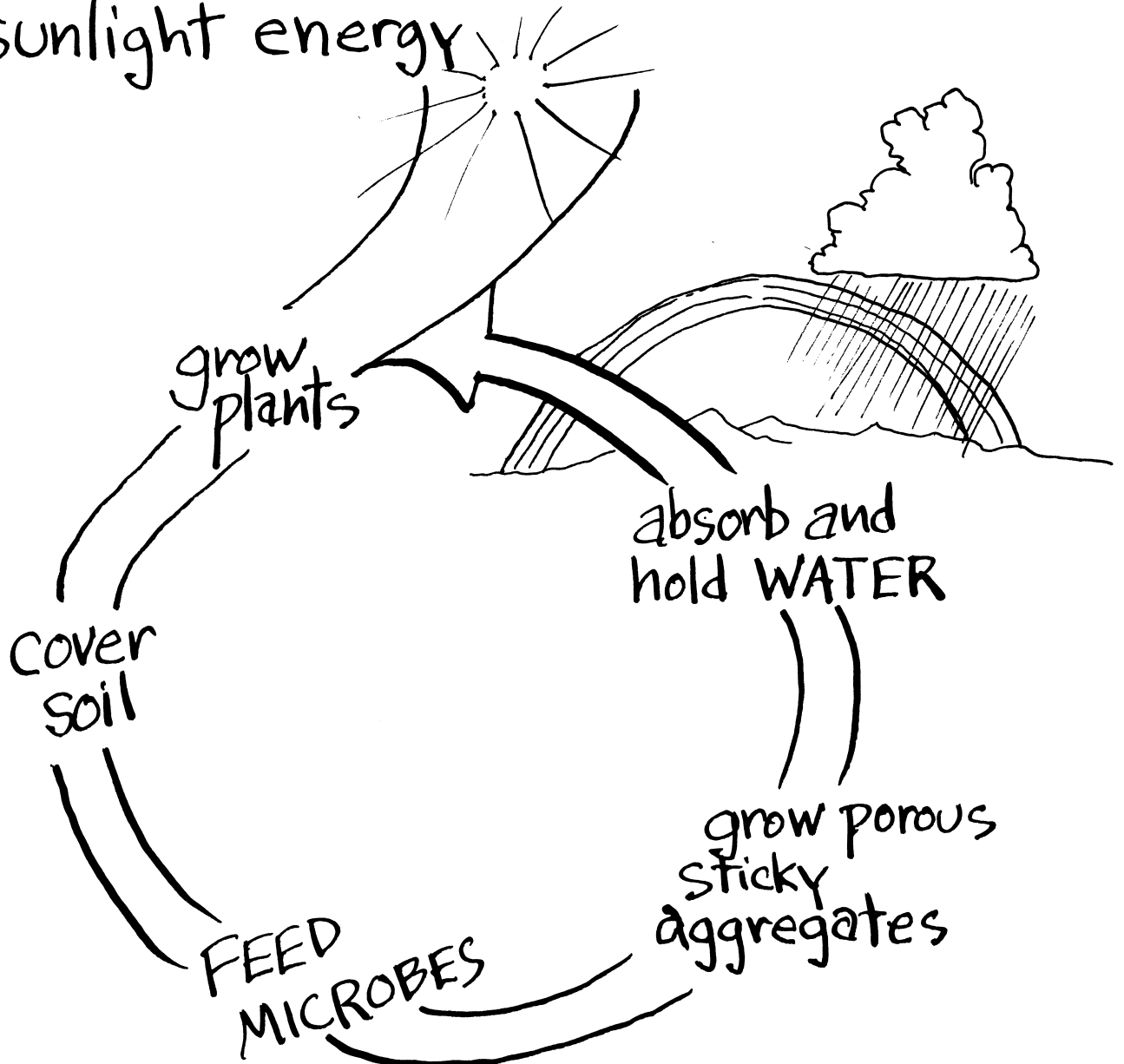
It's hard to manage it unless we can recognize it. Measuring it over time — a few years or more — can help even more.

The flow of sunlight energy is often camouflaged by a focus on problems.



These problems are important and often urgent, and we can add to them endlessly. But the business of ranching is to turn sunlight into forage and flesh. There are specific, local, and simple ways to measure that over time.

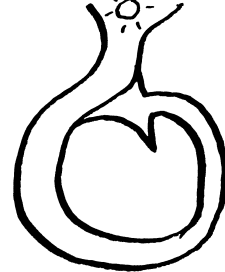
The BIG FORCE is the cascade of sunlight energy



WAIT. ON MY RANCH,
HOW MUCH GRASS I
GROW DEPENDS ON
HOW MUCH IT RAINS.

Well, that's PARTLY TRUE.

But consider the power of the reinforcing feedback, given TIME.



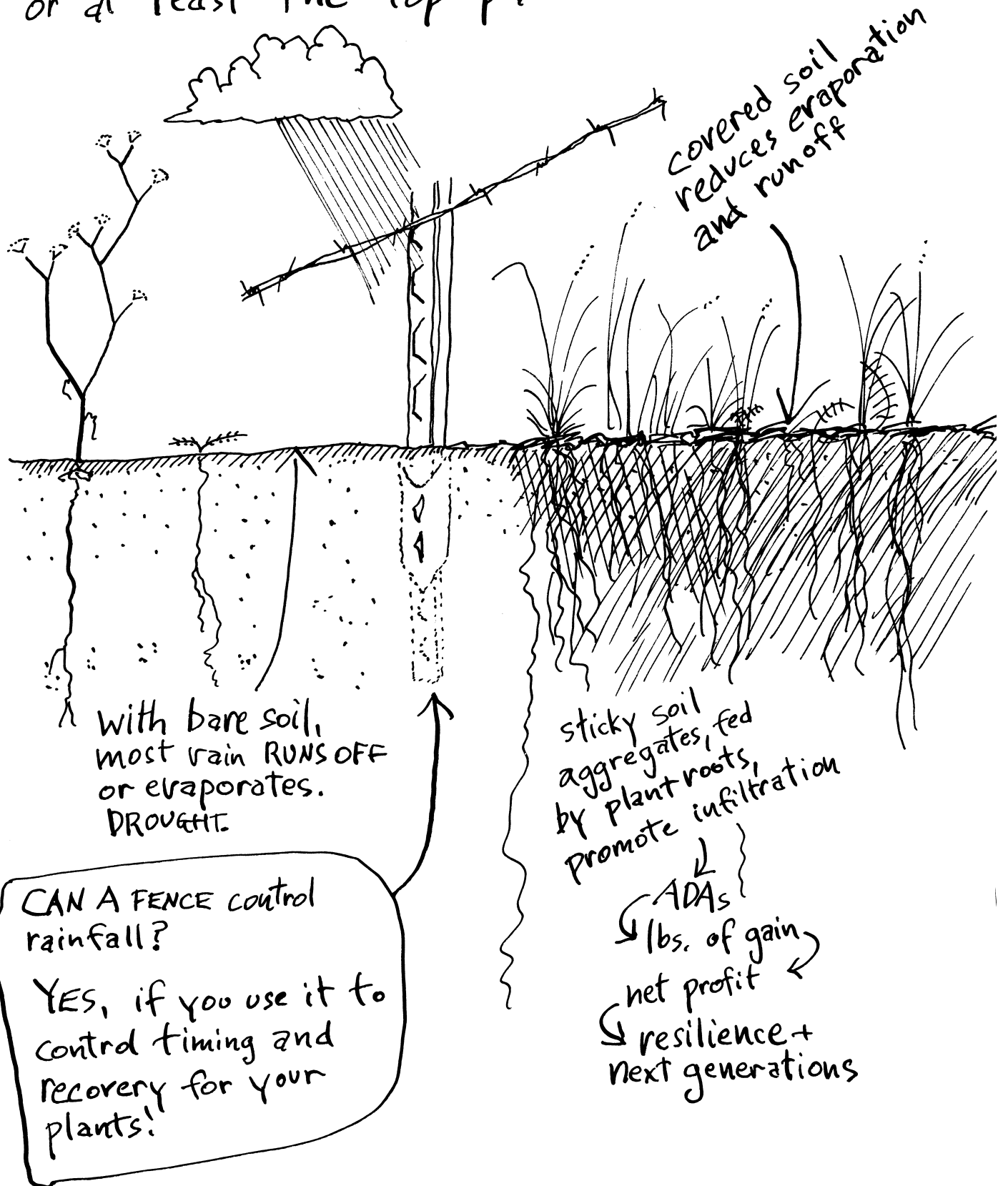
In South Africa, rancher Sandy Speedy was told that the amount of beef he could raise depended on rainfall. So he kept track.

Over the next 22 years, Speedy **TRIPLED** the pounds of beef per inch of rainfall.

In Nebraska, Terry Gompert worked up to an average of 2.85 Animal Days per Acre (ADA) per inch of rainfall, compared to his neighbors' average of 1.

In both cases these ranchers increased stock density (animals per acre) and decreased grazing periods for their paddocks.

Maybe you've seen something like this,
or at least the top part:



FIND OUT FOR YOURSELF

You, or someone on your team, could measure this BIG FORCE. Here's one simple way:

- 1 Keep track of ADAs (Animal Days per Acre) which is a measure of forage that is grazed. This could be for the whole ranch, or better yet for each pasture.

230 pairs graze a 184-acre pasture for 8 days in February and for another 12 days in May:
 $230 \times 20 \text{ days} = 4,600 \text{ Animal Days}$
 $\div 184 \text{ acres} = 25 \text{ ADAs/acre}$

- 2 Keep track of rainfall for the water year (Oct 1 - Sept 30) or for the 12 months before you figure ADAs.

$25 \text{ ADAs/acre} \div 12.5 \text{ inches of rain} =$

2 ADAs per acre per inch of rain

- 3 Everyone's situation is different, but you can share this figure.

6

Your animals can measure the
EFFECTIVENESS of turning sunlight
into grass!

If you are running more
than 1 class of livestock:
1000 lbs of live weight
grazing for one day =
ANIMAL DAY

If you keep track of weights, you can
figure sunlight into flesh:

1. begin and end accounting period
When you know your weights
2. lbs. gain per acre per inch of rain =
(ending weights - start weights -
lbs. bought + lbs. sold)
% acres grazed
% inches of rain
3. Note death loss and supplemental feed.
4. Everyone's situation is different.
How effective can You be, over time?

For rainfall see
[wunderground.com/
history](http://wunderground.com/history) or
cocoahs.org

There are big opportunities to work WITH the big force, the circle of life with its potential for reinforcing feedbacks. Because these systems are variable and truly complex, implementing a practice does not guarantee a result.

So, track your progress, even the dips. If you witnessed a miracle, would you dismiss it as a fluke, and forget about it in 3 months or a year?

The best time to establish a baseline may have been 10 or 20 years ago, but the second best time is now.

Record photos, infiltration, production, brix, soil or forage or food analysis, and soil cover for free on atlasbiowork.com



Get advice and mentorship with the California RANCHER-TO-RANCHER project here:
soilcarboncoalition.org/R2R





The Soil Carbon Coalition can help you and your community grow a shared, evidence-based intelligence on soil health and watershed function:

- inquiry-based learning for schools and communities: soilcarboncoalition.org/learn
- open-source, open-access data entry and mapping: atlasbiowork.com
- Land Listeners workshop: soilcarboncoalition.org/land-listeners-project
- Soil Carbon Challenge: soilcarboncoalition.org/challenge

Questions? Suggestions? info@soilcarboncoalition.org

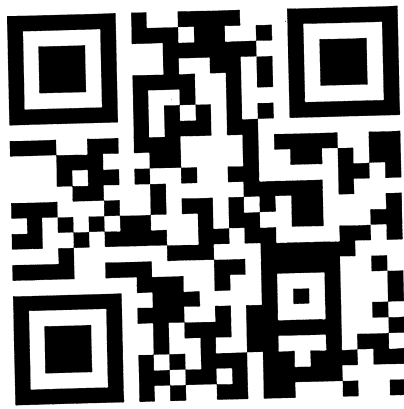
Should we make INEFFECTIVE SYSTEMS
more efficient?
more benign?

If you want to make SMALL CHANGES:
change how you DO things.

If you want to make BIG CHANGES:
change how you SEE things.

— DON CAMPBELL

Saskatchewan rancher



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