

Organic dairy farmer herd health decisions on treatment and prevention of disease

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INTRODUCTION:

Organic dairy farmers are prohibited by the National Organic Program from using any antibiotics or synthetic substances on their farm.¹ Therefore disease prevention strategies, such as vaccination, are largely stressed within organic dairy systems. However, studies have shown that organic farmers are less likely than conventional farmers to regularly use a veterinarian or to vaccinate their herd.^{2, 3, 4} Therefore, they may have a different approach to herd health from conventional dairies. Yet little is known about how organic farmers perceive their herd health, and how they make management decisions.

OBJECTIVES AND HYPOTHESES:

- The objectives of this study were to:
 - Identify common herd health challenges faced by organic dairy farmers
 - Understand the disease prevention and treatment strategies used by organic farmers
- We hypothesized that:
 - Organic dairy farms may experience fewer displaced abomasums due to the cow's high forage diet, but more fly and parasite problems due to their grazing environment.
 - Vaccine and antimicrobial use would be low, primarily due to vaccine safety concerns and the economic cost of using antimicrobials.

METHODS

- Producers were recruited through the National Organic Producers list, Organic Valley, organic certifiers and through snowball sampling.
- Semi-structured in-person interviews were conducted with 23 producers.
- Interviews were coded systematically for themes that addressed the research questions.

RESULTS

- Farmers were distributed throughout Ohio, all sold milk to Organic Valley, average herd size was 44 cows, and 78% were members of the plain community.
- All producers who transitioned from conventional production reported a perceived improvement in herd health, specifically in a decline of DA's. (Quotes 1,2).
- Mastitis, lameness, and flies were the top reported herd health challenges. (Fig. 1)
- Supplements, cleanliness, and nutrition were the top reported prevention strategies. (Fig. 2)
- Fifty-seven percent (13/23) of farmers reported using vaccines (Fig. 3)
- All non-vaccinating farmers (10) reported having no need for vaccines, 40% (4/10) of non-vaccinating farmers reported a desire to focus on the overall health of the cows rather than relying on vaccines. (Quote 4)
- Other reasons to not vaccinate included safety and ease of use concerns. (Fig. 4) (Quotes 3 and 5)
- Forty-three percent (10/23) reported using an antimicrobial in the last 3 years.
- Farmers reported antimicrobials as costly, inconvenient, and typically used too late due to attempting to treat with alternative therapies first. (Quotes 6, 7)

DISCUSSION

- Organic farmers seem to consider flies as a major health concern and few effective treatment options were reported, indicating a need for more effective organic fly treatments.
- An analysis of farmers that don't vaccinate indicates that there is a need for more education regarding the risk of disease introduction, vaccine safety, and potential benefits of vaccination.
- Case identification protocols may be beneficial for producers as they navigate using antimicrobials when treatment is necessary.

Organic farmers that do not vaccinate their cows cite safety concerns, lack of perceived need, and inconvenience.

FIGURES

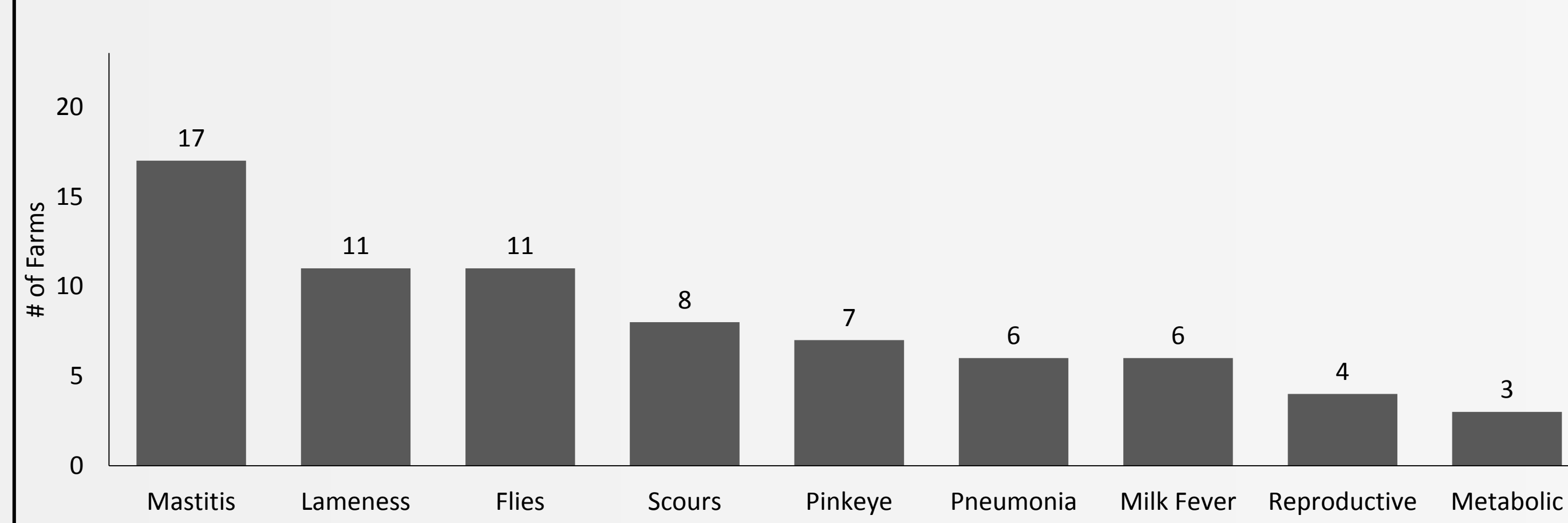


Figure 1: Perceived herd health challenges reported by farmers (n = 23) when asked what their 3 top herd health challenges were.

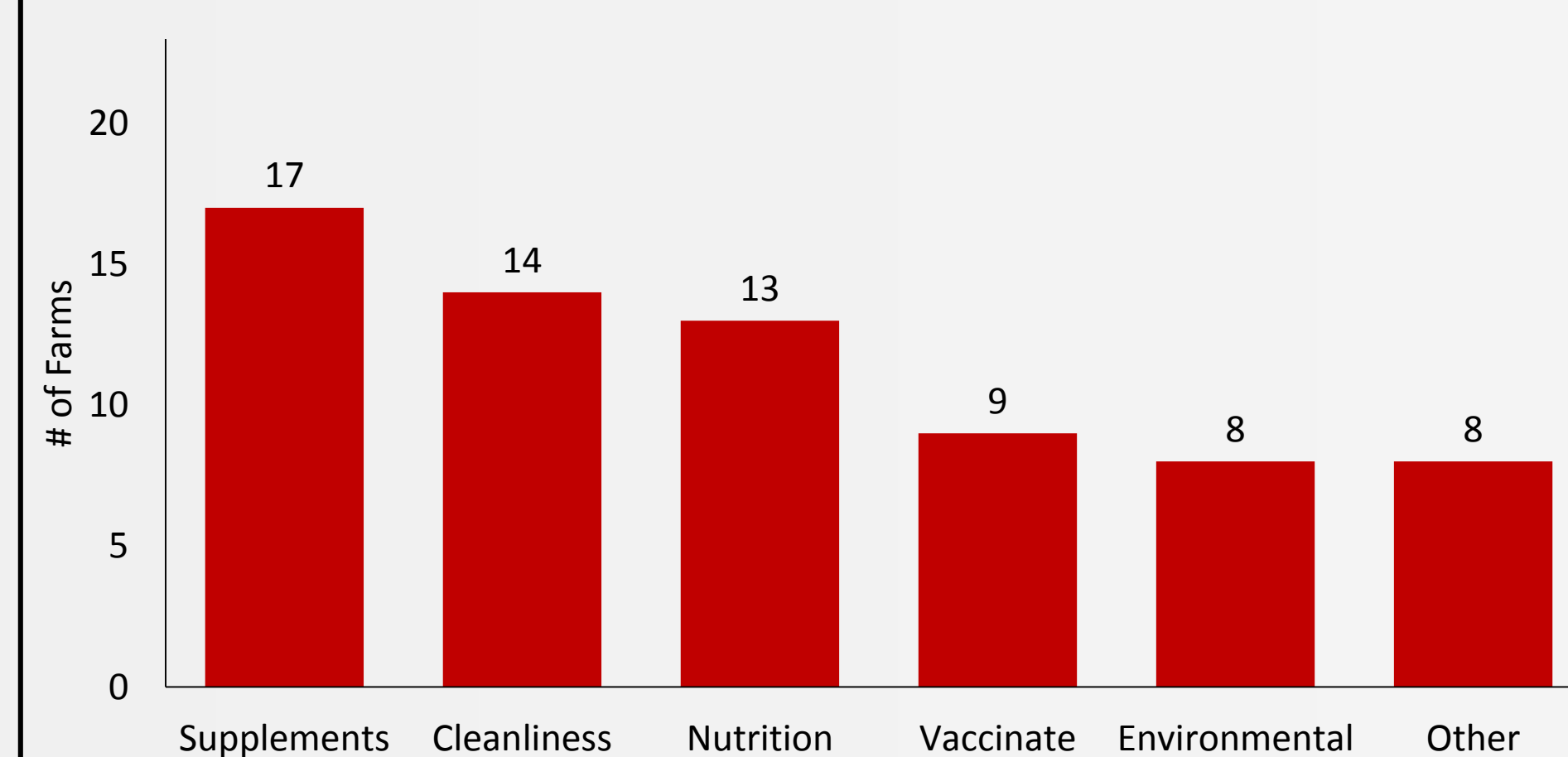


Figure 2: Top prevention strategies reported by farmers (n = 23) when asked what their top 3 prevention strategies were. Supplements refers to minerals, vitamins, and probiotics administered regularly. Other includes genetic selection, closed herd, colostrum testing and hoof trimming.

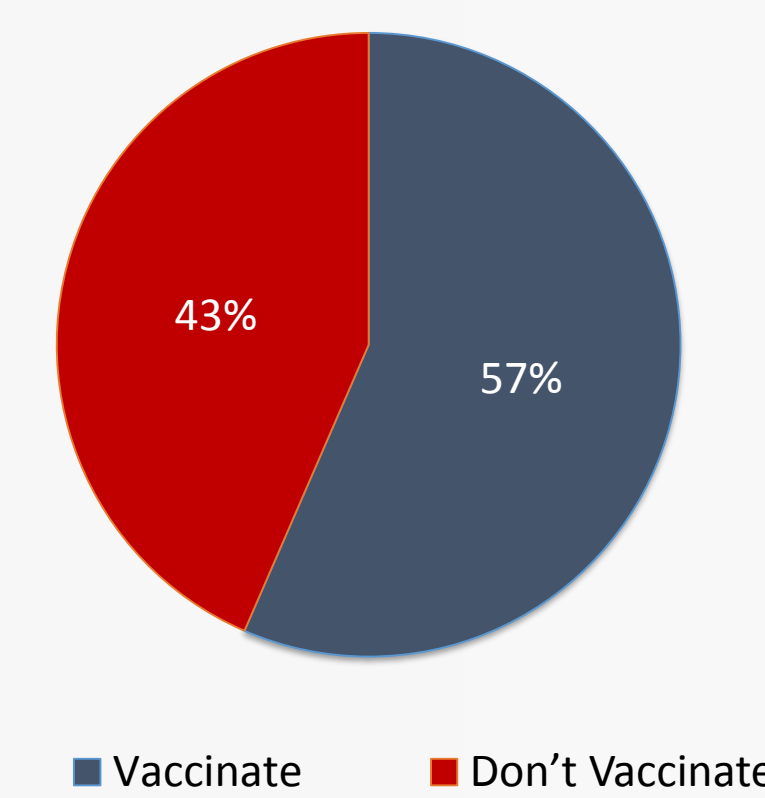


Figure 3: Reported vaccine use by farmers (n = 23)

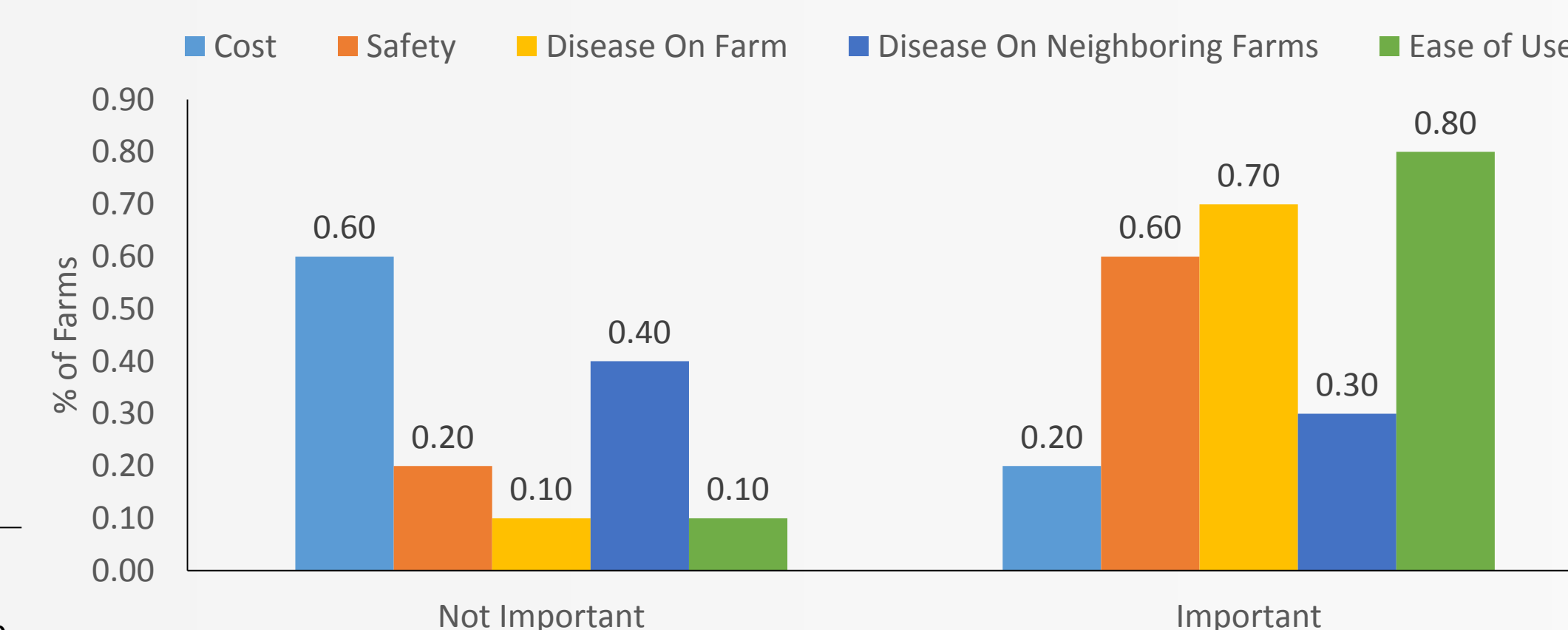


Figure 4: The views of farmers, who don't vaccinate (n = 10), on the importance of certain factors when making the decision to vaccinate or not vaccinate.

QUOTES:

Herd Health:

- #1 Positive changes:** "We're not pushing them as much either" "There was just fewer sick cows" "We hardly ever get the vet out" "We've just hardly had any DAs" "Since we're grass fed, we have very little mastitis"
- #2 Negative Changes:** "That is probably one of our biggest challenges since going organic is just simply that fly control" "Year after year those flies are terrible"

Vaccines:

- #3 Safety:** "That would be important to me in the fact that virtually any vaccine that you give to a cow, she will drop in milk that day" "The cows will abort because you gave them the vaccine" "We vaccinated with the pinkeye vaccine, and we just had a pinkeye outbreak. I think we just gave all our cows pinkeye."
- #4 No Need:** "The cows were healthy, so just got away from it [vaccinating]" "As long as we can get by and everything seems to be going okay, we probably won't do it" "I feel if you keep your immune system of your animals high, its not as important" "Well I say, try and stay healthy and then just fight it off"
- #5 Ease of Use:** "I do give shots, but it's just something I'm not really particularly fond of." "So you have this whole bottle, then you have to throw the rest of it away" "I never liked doing it" "I just don't get the job of vaccinating everything, every year. Just doing it. I'd rather feed them preventative stuff."

Antibiotics:

- #6 Cost:** "Well obviously the biggest factor that you don't use antibiotics is because you know that if you do that cow is only salvageable after the antibiotics are clear to the stockyards. So it's a financial thing." "So we had a big vet bill and a worthless cow",
- #7 Timing:** "By the time we try our natural approaches, and if that doesn't work, we're more likely to just cull the cow. That or just shoot her." "I mean its basically, yeah, the last resort situation" "I might wait just a little too long to look at antibiotics"

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