



Cornhusker Economics

Informing the (Willfully) Uninformed

| 10-30-19 Market Report | Year Ago | 4 Wks Ago | 10-25-19 |
|--|----------|-----------|----------|
| Livestock and Products, | | | |
| Weekly Average | | | |
| Nebraska Slaughter Steers, 35-65% Choice, Live Weight. | 115.00 | * | 107.00 |
| Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb. | 172.62 | 161.24 | 156.05 |
| Nebraska Feeder Steers, Med. & Large Frame 750-800 lb. | 160.01 | 152.97 | 150.54 |
| Choice Boxed Beef, 600-750 lb. Carcass. | 211.50 | 218.75 | 223.08 |
| Western Corn Belt Base Hog Price Carcass, Negotiated | 58.38 | * | * |
| Pork Carcass Cutout, 185 lb. Carcass 51-52% Lean. | 75.57 | 68.10 | 75.00 |
| Slaughter Lambs, woolled and shorn, 135-165 lb. National. | 135.62 | 150.16 | 149.28 |
| National Carcass Lamb Cutout FOB. | 378.61 | 392.70 | 398.03 |
| Crops, | | | |
| Daily Spot Prices | | | |
| Wheat, No. 1, H.W. Imperial, bu. | 4.46 | 3.55 | 3.65 |
| Corn, No. 2, Yellow Columbus, bu. | 3.34 | 3.70 | 3.69 |
| Soybeans, No. 1, Yellow Columbus, bu. | 7.32 | 7.93 | 8.29 |
| Grain Sorghum, No.2, Yellow Dorchester, cwt. | 5.30 | 5.68 | 5.96 |
| Oats, No. 2, Heavy Minneapolis, Mn, bu. | 3.16 | 3.08 | 3.13 |
| Feed | | | |
| Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton. | 108.00 | * | * |
| Alfalfa, Large Rounds, Good Platte Valley, ton. | 105.00 | 105.00 | 107.50 |
| Grass Hay, Large Rounds, Good Nebraska, ton. | 87.50 | 105.00 | 95.00 |
| Dried Distillers Grains, 10% Moisture Nebraska Average. | 135.00 | 141.00 | 145.50 |
| Wet Distillers Grains, 65-70% Moisture Nebraska Average. | 48.50 | 42.50 | 51.00 |
| * No Market | | | |

Antimicrobial Resistance: The Role of Food and Agriculture or Nature White Noise -- which would you rather watch?

A recent study by researchers in the Department of Agricultural Economics at the University of Nebraska-Lincoln gave participants that choice. Nearly 40 percent of respondents avoided learning about antimicrobial resistance and chose the white noise video. The goal of the study was to shed light on the role that certain individual characteristics, such as knowledge, perceptions and attitudes, play on information avoidance behavior. In the study, information avoidance behavior is examined in the context of antimicrobial resistance.

The standard view in economics is that information is valuable to people because it improves decision-making. Therefore, rational individuals will not avoid valid information, except in situations in which ignorance is strategically beneficial. The importance of information in shaping consumer perceptions and attitudes and influencing purchasing decisions is well documented in many studies. In many situations, consumers value and seek out information, and studies show that they are even willing to pay for information that will not affect their decisions (Eliasz and Schotter 2007). While economic analysis of information generally considers information as a means to an end, a growing literature in economics, psychology and neuroscience identifies situations in which people avoid information even when information is free and could improve decision-making (Golman et al. 2017).

Information avoidance can be defined as any behavior designed to avoid acquiring available but potentially unwanted information (Sweeny et al. 2010). Individuals may avoid information strategically to give themselves permission to indulge in food consumption or purchases, to prevent themselves from reconsidering decisions

in the future, or to avoid exposure to information that they expect would make them feel bad (Carrillo and Mariotti 2000; Golman et al. 2017). For example, investors monitor their financial portfolios frequently when the market is up but avoid looking at them in falling markets (Karlsson et al. 2009). Also, the anticipation of finding out unfavorable information significantly reduces the likelihood of obtaining the information (Ferrer et al. 2015). Sullivan et al. (2004) surveyed 2,241 people who were at high risk of contracting HIV in seven U.S. states and found that 18 percent of the respondents avoided knowing their HIV test results. Of those, around 23 percent chose to avoid information because they were scared of knowing the results. In a study that examined information avoidance behavior in the context of animal welfare, Bell et al. (2017) gave participants the option to obtain information about farm animal production methods. They found that about one-third of their respondents chose not to receive information, stating that they trust farmers and have more important issues to worry about. According to the authors, guilt avoidance was the main motivational factor for information avoidance in their study.

An individual's choice to avoid information becomes particularly consequential when informing the public about a critical issue is a policy goal. A case in point is the World Health Organization (WHO) Global Action Plan on antimicrobial resistance (AMR) that was launched in 2015 to raise awareness and improve understanding of AMR through educational and communication campaigns that target both healthcare personnel and the general public (WHO 2015)¹. Given evidence from studies of information avoidance behavior showing that responses to potentially uncomfortable information are highly variable, it is particularly important to determine whether different characteristics of individuals systematically explain individuals' decisions to access or avoid information so that information can be more effectively targeted to various types of individuals.

The recent department study focused on the role of self-assessed (subjective) and objective (measured) knowledge of antimicrobial use in agriculture and AMR on the decision to access or avoid information related to AMR. An online survey was designed to achieve study objectives. The study was completed by a representative, random sample

¹ AMR is the ability of microorganisms (such as bacteria, fungi, viruses, and parasites) to resist the effects of antimicrobial drugs (such as antibiotics, antifungals, antivirals, and antimalarials). AMR microorganisms are resistant to important treatment options, increasing the severity of the disease and the risk of spreading infections to others. Recent studies show that globally 700,000 deaths are attributed to AMR each year and this number is predicted to rise to 10 million people by 2050. In the United States, around 2 million people are infected with antimicrobial-resistant bacteria each year out of which 23,000 die (CDC 2013).

of 1,030 residents across the United States. Participants were recruited by IRI, a leading online survey firm. The online survey was divided into two sections. The first section asked questions on demographic characteristics, meat consumption habits, personal history of antibiotic use, self-assessed and objective knowledge of livestock production practices and AMR, and attitudes towards antibiotic use in livestock production and AMR. The second section of the survey was used to identify information avoidance behavior by asking participants to select one of two videos to watch. The first video was labeled (i) *Antimicrobial Resistance: The Role of Food and Agriculture*, while the second was labeled (ii) *Nature White Noise*. The first video was an animated video produced by the Food and Agriculture Organization of the United Nations presenting a definition, causes and consequences of AMR in lay terms. The video titled *Nature White Noise* contained a black screen with rain and thunderstorm sounds and had no information content. The length of each video was 3 minutes and 35 seconds. Since participants were taking a survey on AMR, watching the AMR video could provide them with useful information. However, watching the white noise video indicates information avoidance. Before selecting a video link, participants knew that the length of each video was the same and there was no option to skip the video. To determine the effects of AMR information on participants' perceptions of AMR, participants re-answered a set of questions related to their perceptions of AMR. Participants who chose to watch the white noise video were asked about their reasons for avoiding the AMR video.

Survey results show that about 39 percent of respondents avoided AMR information. The top three reasons for avoiding AMR information were: (1) watching a video is not going to change my existing view, (2) scared of knowing about AMR, and (3) there is nothing I can do to solve the AMR issue. A binary logit model was used to investigate the role of knowledge in information avoidance behavior. Results show that individuals with low subjective or objective knowledge of AMR were more likely to avoid information about AMR than more knowledgeable individuals. A second econometric model, the panel regression model with random effects specification, was used to determine the effects of AMR information on participants' perceptions of AMR. These results show that participants who chose to watch the AMR video improved their understanding and perceived importance of AMR and respondents with little or no knowledge changed their views the most.

Study findings that individuals who assessed having little or no knowledge of AMR were more likely to choose to remain uninformed, demonstrating willfully

uninformed behavior, which suggests that policy makers, nongovernmental organizations and industry groups should devise information provision strategies that might involve a variety of sources, mediums and contents to encourage willfully uninformed individuals to access information about such critical issues. The development of such information strategies is the focus of a new UNL study; stay tuned.

References

- Bell, E. B. Norwood, and J.L. Lusk. 2017 “Are Consumers Willfully Ignorant About Animal Welfare?” *Animal Welfare*, 26: 399-402.
- Carrillo, J. D., and T. Mariotti. 2000. “Strategic Ignorance as a Self-Disciplining Device,” *Review of Economic Studies*, 67(3): 529-544.
- Center for Disease Control and Prevention. 2013. “Antibiotic Resistance Threats in the United States.” U.S. Department of Health and Human Services.
- Eliaz, K., and A. Schotter. 2007. “Experimental Testing of Intrinsic Preferences for Non-Instrumental Information,” *American Economic Review*, 97 (2): 166-169.
- Ferrer, Rebecca A., Jennifer M. Taber, William M.P. Klein, Peter R. Harris, Katie L. Lewis and Leslie G. Biesecker. 2015. “The Role of Current Affect, Anticipated Affect and Spontaneous Self-Affirmation in Decisions to Receive Self-Threatening Genetic Risk Information.” *Cognition and Emotion* 29 (8): 1456-65.
- Golman, R., Hagmann, D. and Loewenstein, G. 2017. “Information Avoidance.” *Journal of Economic Literature*, 55(1): 96-135.
- Karlsson, N., Loewenstein, G. and Duane Seppi. 2009. “The Ostrich Effect: Selective Attention to Information.” *Journal of Risk and Uncertainty*, 38 (2): 95-115.
- Sweeny, K., D. Melnyk, W. Miller, and J. A. Shepperd. 2010. “Information Avoidance: Who, What, When and Why,” *Review of General Psychology*, 14(4): 340-353.
- Sullivan, P., S., Lansky, A. and Drake, A. 2004. “Failure to Return for HIV Test Results among Persons at High Risk for HIV Infection: Results from a Multistate Interview Project.” *Journal of Acquired Immune Deficiency Syndromes*, 35 (5): 511-18.

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