

# Will Cows Eat Anything?

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NEWARK, Del. — Cows will eat anything, at least that's what we've always been told.

Take the many deadly cases of cows that have ingested hardware. Cows will graze big mouthfuls, regardless of whether the grass contains a few odds things like nails, barbed wire, or pieces of tin. She will swallow it without blinking an eyelash and eventually get deathly ill.

Why don't cows sort what they eat? Are they just plain dumb?

Everybody says so. Today's dairy cows are very high milk producers. Is this because they eat anything put before them?

Sheep or goats, on the other hand, are choosier. Even in textbooks these ruminants are called "selective eaters." Some people claim goats aren't selective at all. They, too, have been known to eat anything — tin cans, some say, or

a paycheck snatched out of a person's pocket. Yet nobody calls goats dumb.

Goats are just inquisitive, sometimes to their own detriment.

But dairy goats are also high milk producers though sheep are not. Is the common denominator to high milk production dumbness, eating everything and a lot of it, or both?

One of the most difficult things in nutrition research has been predicting how much dairy cows will eat.

Cattle breeders generally agree that characteristics — like a broad mouth muzzle, a deep heart girth, a broad chest floor, and wide, deep ribs — are indications that a cow has the physical makeup to eat a lot and digest a lot for greater milk production.

Cattle breeders select for cows that look like they are always hungry and can eat a large volume of feed daily.

So it is feed intake, sometimes

called "voluntary" feed intake, that interests milk producers although feed composition tables never include this.

They report contents of major and minor nutrients, and many equations have been devised to try to predict what a cow will do with a certain feed. Actually this leads to the great unknown parameter — palatability.

Nutritionists who worry about voluntary feed intake of cows say indirectly that a cow isn't that dumb; she won't eat anything and everything before her, contrary to common belief.

The truth is that many cows have "hollow belly" disease.

The stomach system, primarily the rumen, has a maximum capacity of 40 or 60 gallons, more or less, depending on the size of the cow. Yet many cows fill up this capacity to two-thirds or three-quarters or only one-half volume. Why?

Something intuitively or metabolically tells the cow to either not eat certain things or not so much or to stop completely because she

may have had enough.

So maybe our dairy cows aren't so dumb after all. Because of this tendency and a less-full stomach, some cows produce less milk than they could were they dumber and ate more.

True, say the nutritionists, who work on the question of voluntary intake. Make the cow eat more, they say, and she will produce more milk; nutrient composition is really secondary to the question of voluntary intake.

At the University of Delaware we have dealt with this question in many studies. We have identified factors that the cows recognize in their choice of high or less high voluntary feed intake.

One such factor is fiber content, which goes along with progressive maturity of grass or hay. A cow needs fiber desperately every day, but only up to a certain level. Then she says enough is enough and she eats less.

Clever people have used pre-digested fibrous feeds that fooled cows into eating more.

Other factors we found that decrease consumption are mold and staleness of feeds, especially of concentrate supplements.

When we buy a one-year contract of concentrates for our university dairy herd, we always require that the feed first be eaten by our cows for at least a week prior to the final sale.

No laboratory test can substitute for the palatability test only our cows can give.

And there have been occasions when we refused shipment and renegotiated a contract because of that critical cow taste test.

So dumb cows eat anything? It ain't so!

Today there are essentially two concepts for the feeding of cows: one is the TMR, or total mixed ration; the other is individualized feeding, usually using a computer control system.

In either case, cows are still given their feed free choice and "ad libitum" — that is, buffet-style and all you can eat.

For the TMR feed offering, roughage and grain are mixed in a certain proportion, but the cows still have free choice ad libitum. For the computer feeding, hay and silage are given free choice ad libitum; only the concentrate is offered in controlled amounts.

We say to cows: Eat as much as you can, please! Our milk production from you depends on it.

Back to the question of palatability. How do we make all these free choices palatable? Or, how do we keep our cows dumb, so that they eat anything and more of it?

In our university herd and in many other herds in recent years, it is the concept of "freshness" of feed, the practice of feeding more than once a day and into a

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## PORK PRODUCTION FORUM

Wednesday, December 20, 1995

9:30 a.m. - 2:30 p.m.

Country Table Restaurant

740 East Main Street, Mount Joy, PA

### Program

9:30 - 10:00

Registration (Coffee & Donuts)

10:00 - 10:50

"Swine Nutrient Management"

Mike Brubaker, Nutrient Resource Management, Inc.

11:00 - 11:50

"Environmental Outlaw or Pork Producing Hero Facing Legal Challenges"

Greg Andrews - Attorney  
Drake University - Ag Law Center  
NPPC - Environmental Law Education Coordinator

12:00 - 12:40

Free Buffet Lunch

12:40 - 1:00

Annual meeting and election of Pork Board Nominees Vote on LanChester Pork Producers Bylaws

1:00 - 2:00

Choice of two seminars

A. Pork Quality Assurance Level III - Recertification

Dr. Tim Trayer

B. Pork Quality Assurance Level III - 1st time Certification

Dr. Robert Graybill

2:00 - 2:30

P.R.R.S. Update

Dr. Robert Graybill

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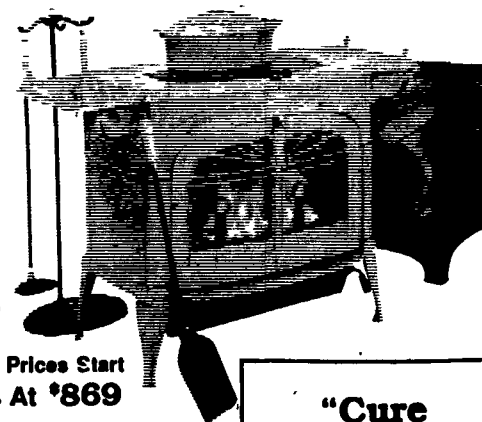
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