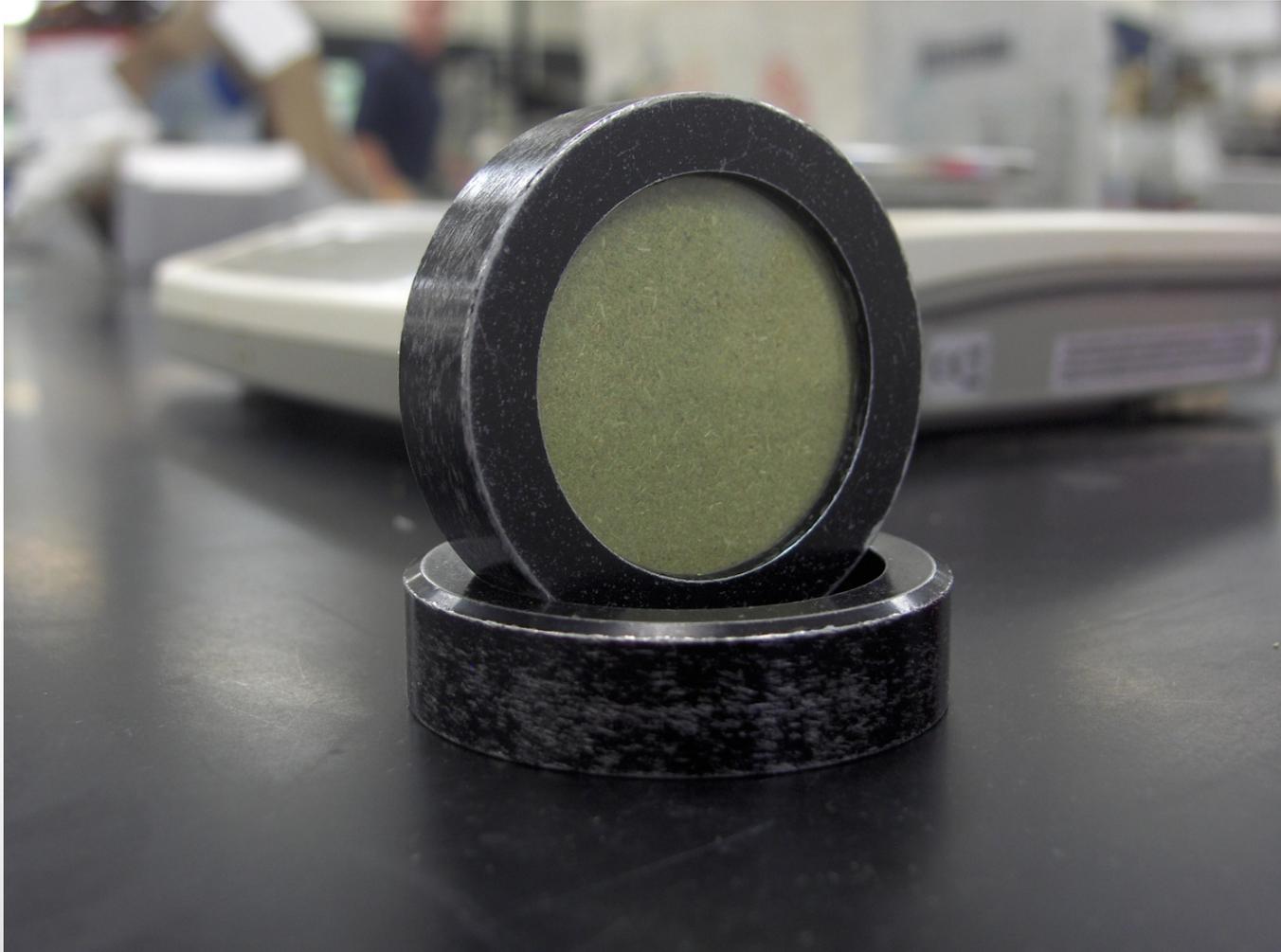


# NIRS Sample Cell



# Loaded Sample Cell



# NIRS Instrument



# Mycotoxins

- Relatively “new” to the Ag world – 1960’s
- Clients use mycotoxin/aflatoxin interchangeably & are surprised to learn there are more
- SDK screens for Aflatoxin, DON (Vomitoxin), Zearalanone, Fumonisin, & T-2
- Pose a particular threat in distiller’s byproducts; concentrates toxin by x3 or x4
- Contamination occurs in field or storage

# Aflatoxin

Species	Limit
Immature livestock & poultry	20 ppb
Breeding cattle Breeding swine Mature poultry	100 ppb
Finishing swine (> 100 lbs)	200 ppb
Finishing beef cattle	300 ppb

# DON (Vomitoxin)

Species	Limit
Cattle	10 ppm; limit to 50% of DMI or 5ppm in diet
Poultry	10 ppm; limit to 50% of DMI or 5 ppm in diet
Swine	5 ppm; limit to 20% of DMI or 5 ppm in diet
All other	5 ppm; limit to 40% of DMI or 5 ppm in diet

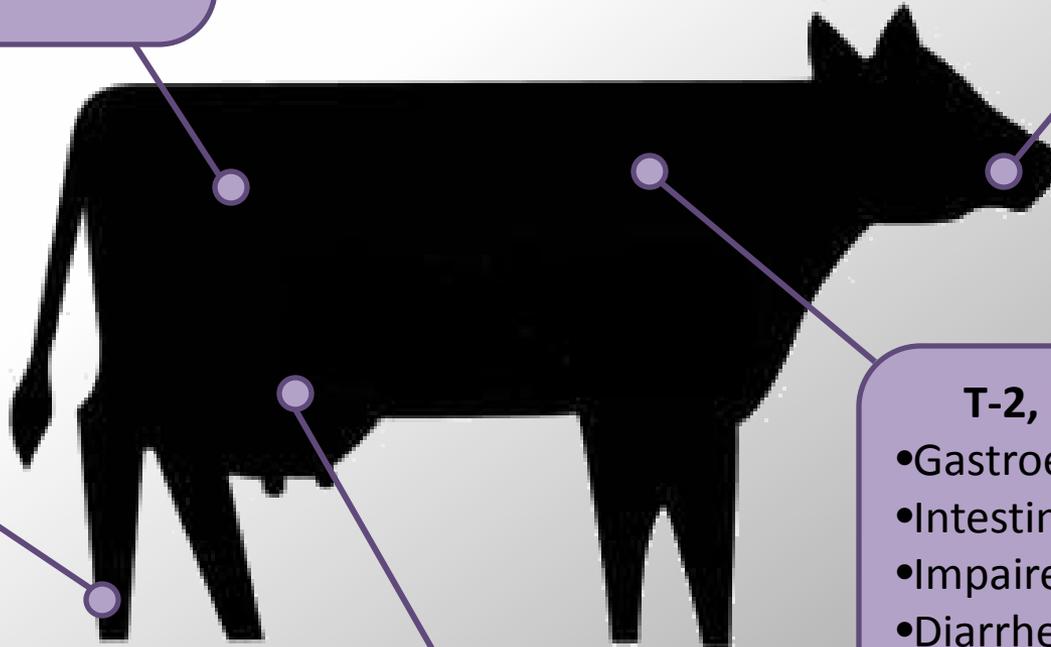
# Mycotoxin Effects

## Zearalenone

- Irregular heats
- Low conception rates
- Ovarian cysts
- Embryonic loss

## T-2 , DON

- Decreased feed intake
- Decreased feed efficiency
- Reduced milk production



## DON

- Laminitis

## T-2, DON, Aflatoxin

- Gastroenteritis
- Intestinal hemorrhages
- Impaired rumen function
- Diarrhea
- Ketosis

## T-2, DON, Aflatoxin

- Milk contamination
- Decreased milk production
- Mastitis