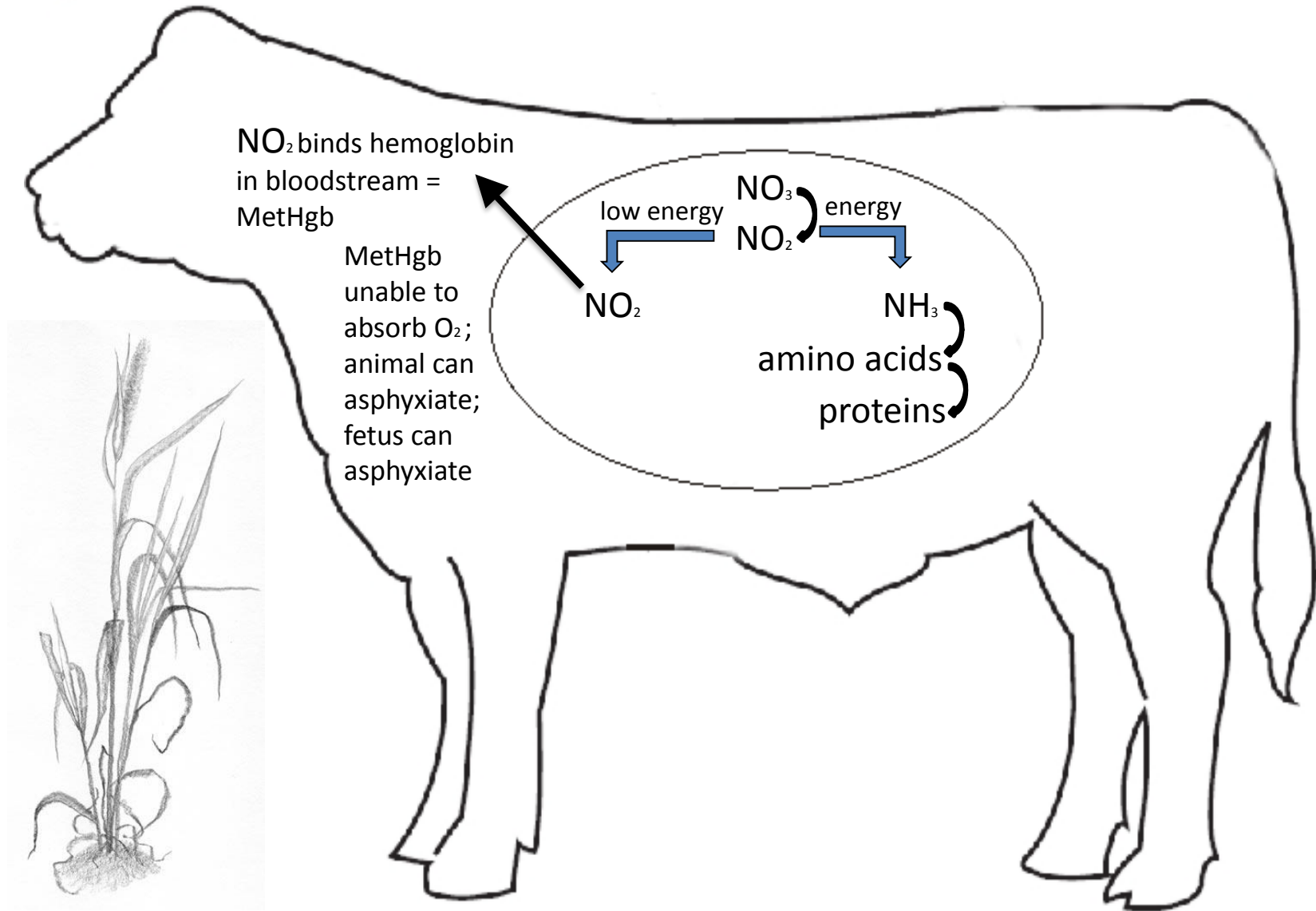
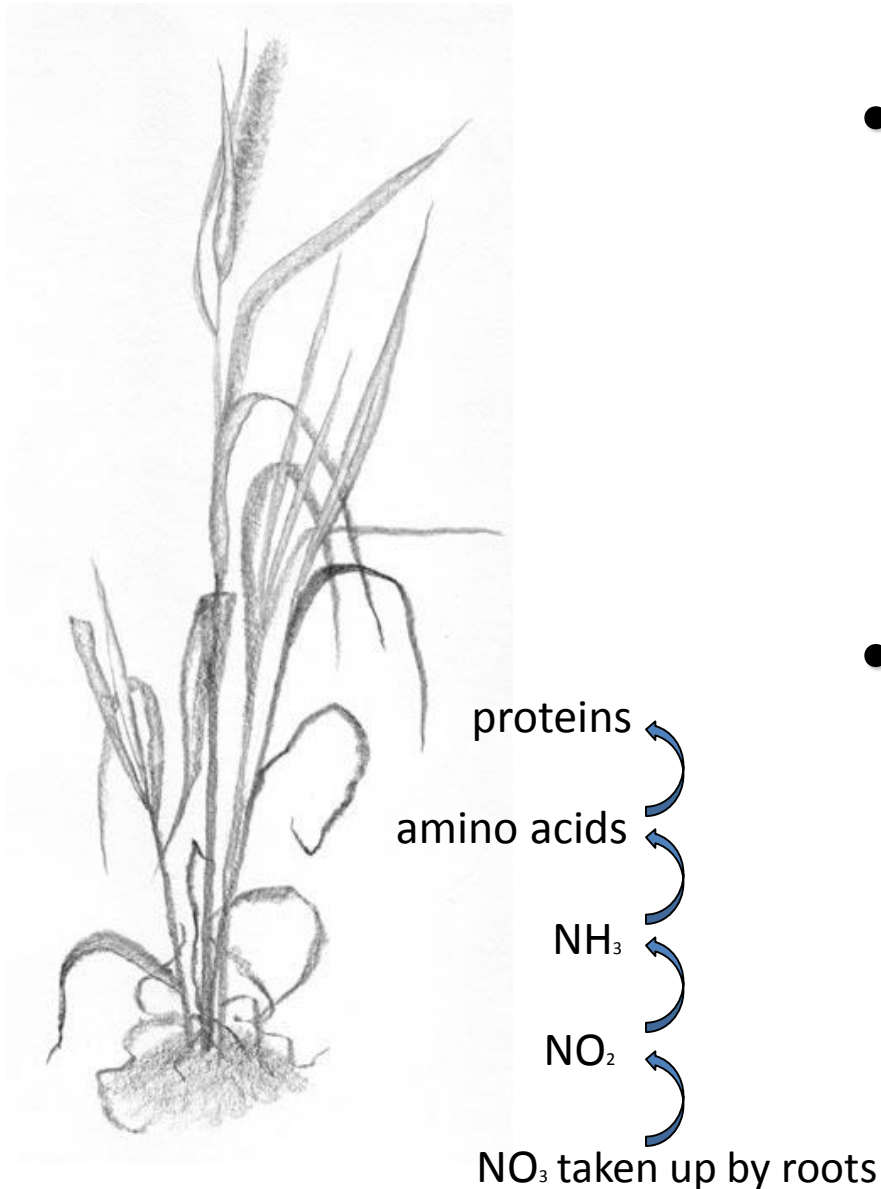


Nitrates in Feed



When do nitrates build up?

- Slow growth
 - Drought
 - Long periods of cloudy weather
 - Herbicide injury
-
- High levels of N fertilization



Which plants are most likely to be a problem?

- **Sorghum, sudangrass, sorghum-sudangrass hybrids, corn, millet, perennial grasses**
- **Curly dock, jimsonweed, johnsongrass, kochia, lambsquarters, nightshade species, pigweed, Canada thistle, smartweed**
- **Lower plant parts (stems/stalks) are higher in nitrates than leaves**

How much nitrate is too much?

NO₃-N	NO₃	Category	Recommendation
ppm			
0 to 550	0 to 2,500	SAFE	Forage is generally safe to feed to all classes of livestock.
550 to 1,100	2,500 to 5,000	CAUTION	Forage with this nitrate (NO ₃) content can cause a problem with pregnant and young animals. Do not feed forage with nitrate levels this high in combination with nonprotein nitrogen supplements, and limit forage with NO ₃ levels this high to one-half of total ration.
1,100 to 3400	5,000 to 15,000	DANGER	Limit forage with this NO ₃ level to one-fourth of total ration. Should supplement forage of this type with energy, minerals and vitamin A.
More than 3,400	More than 15,000	TOXIC	Forage with this NO ₃ level or higher is toxic and should not be fed under any circumstance. If forage with this NO ₃ concentration must be fed, it should be mixed with other feed and make up no more than 15 percent of the total ration.

What to do with high nitrate forage

- **TEST** to be sure the forage is high
- **Wait** for plants to regrow for 5 days or so after a significant rain
- **Increase** residual grazing and/or harvest height
- **Make silage**
 - 25 to 50% of nitrate lost during ensiling process
- **Dilute** with other feeds
- **Slowly increase** nitrate levels in feed
- **Feed** to non-reproductive stock
- **NEVER GREEN CHOP AND FEED**