

(W)HOLISTIC ANIMAL HUSBANDRY

by Jerry Brunetti

Practitioners using alternative approaches to livestock health have to ultimately concern themselves with several fundamental keynotes that are inextricably associated with livestock performance and health, regardless of whether the therapeutic modalities used are allopathic or naturopathic. To truly address the fundamental issues discussed herein, thorough attention must be given to the physical, chemical and biological needs of soils.

THE FIVE DIGESTIVE KEYNOTES

- 1) Maintain proper acid/alkaline balance. The flora/fauna in the gut are very pH dependent. (Ideal rumen pH - 6.4) Additionally the pH of the cell and blood stream are maintained at a very narrow window of tolerance. Check fecal pH to determine pH levels. For ruminants, increase fiber (ADF) and/or reduce grain to enhance salivation which will increase rumen pH. For ruminants and monogastrics, cationic minerals such as calcite, dolomite, magnesium oxide, sodium bicarbonate, montmorillonite will increase alkalinity; reduce acidity. Free choice and observe/record levels of consumption.
- 2) The “internal eco-system”, that is the G.I. Tract, is becoming deprived of necessary inoculants livestock obtain from the leaf surfaces of forages and the soil as well. This can be especially critical for monogastrics like swine and poultry, but very important to ruminants also. These organisms produce enzymes, growth inhibitors for pathogens, B-vitamins and many unidentified nutrient factors (UNF's) necessary for metabolic and immune function. In lieu of grazing, conventionally produced livestock have been supplemented with antibiotics to help suppress pathogen levels. But, drug resistance has created dangerous strains of E Coli, salmonella, campylobacter, etc. That are now more frequently appearing in the food supply. Additionally, these drugs are immuno-suppressive and interfere with friendly indigenous strains. “Alternative” products can be “probiotics” and enzymes, that can either be purchased from commercial outlets or perhaps obtained from the farm's own topsoil or compost. Herbal bitters, some of which have been reported to be fed since colonial times in America and herbal G.I. Tract stimulants may also be a renewed arcane resource (e.g. Ginger, cayenne pepper, gentian root, peppermint.)
- 3) Blood Urea Nitrogen (B.U.N.) also tested as Milk Urea Nitrogen (M.U.N.) suggests that either too much protein or typically too much “funny protein” which is non-protein nitrogen (NPN) is being consumed. Crude protein merely measures nitrogen, not amino acids, which are needed to repair tissue, build hormones, enzymes, immune cells, detoxify lymph, etc. B.U.N. Suppresses the immune system, feeds pathogens, reduces oxygenation of the cells, overworks liver and kidney, and reduces conception. Make sure forages are grown on mineral-rich and mineral-balanced soils including adequate secondary & trace nutrients. Rapidly available energy such as found in molasses, finely ground grain and digestible cellulose (e.g. beet pulp) will assist in balancing the energy: protein ratio in the rumen. Specific “edible” mineral-rich clays to absorb excess NH₃ will also help.
- 4) Molds and Mycotoxins can present a very serious herd/flock crisis and need to be dealt without hesitation. Molds & Mycotoxins are very toxic, damaging the liver, G.I. tract, kidneys, lungs, etc. Ultimately, poor agronomic practices and toxic chemical remedies must be addressed; sustainable soil practices are a must. Utilizing absorbents such as zeolite, montmorillonite, bentonite, activated carbon will help neutralize some of the metabolic toxins; few options are available to control the mold organism growth; propionic acid, iodine, etc. can

be of some assistance. Animals affected should be given additional levels of vitamins (25% higher) and probiotics/enzymes to assist with compromised digestion and poor appetite.

- 5) Mineral imbalances and mineral deficiencies: Ca:K, Ca:P, K:Na, N:S, are very important to metabolic performance in animals. Trace minerals like cobalt, copper, boron, selenium, zinc, etc. are not necessarily found in many soils at adequate levels today and are vitally important for peak growth, performance, immunity, reproduction, sound feet, longevity and so forth. Free choice mineral supplements, if done correctly, can be a very inexpensive input to correct imbalances and deficiency. Naturally occurring "rare earth" minerals and kelp meal can also be part of the "missing link" laundry list to provide hard to get micro-nutrients.

Important! Keep accurate records over sustained periods of time to determine what is being consumed. This may correlate them to the above-mentioned issues of pH, NPN, molds, etc. as well as excesses of deficiencies of minerals.

For specific ailments the use of nutraceuticals (oral and injectable vitamins/minerals), probiotics (micro-flora and enzymes), essential oils, herbs (given raw, dried or water extract) can be especially effective on all animals raised both conventionally and organically. Calf scours, mastitis, ketosis, milk fever, "off-feed" can all be addressed effectively economically and ecologically utilizing the aforementioned raw materials, especially if the stockman is paying attention to the preventative key notes itemized as 1-5.

Always consult with homeopathic veterinarian for specific homeopathic remedies for the following!

SPECIFIC TREATMENTS

1) Mastitis and Somatic Cell

- a) Check trace mineral levels of Zinc, iodine, selenium, copper
- b) Colostrum Whey
- c) Anti-oxidant vitamins (C,E, A) {both injectable & feed-grade}
- d) Mash/gruel of vinegar, molasses, bran, beet pulp
- e) Herbal Extracts - cayenne, ginger, mint, licorice, Echinacea, garlic
- f) Massage Udder - with "hot" linament (camphor, peppermint, capsicum, etc)

2) Ketosis

- a) I.V. Glucose
- b) Drench with liquid energy sources containing propylene glycol, sugar(s), grain alcohol, acetic/lactic acid
- c) B-vitamins, especially niacin (12 grams/day)
- d) Crude liver extract
- e) Probiotics to help appetite
- f) Herbal extracts to help digestion (ginger, fenugreek, cayenne, licorice, peppermint & fennel) Herbs for liver health (dandelion leaf, burdock root, yellow dock root, milk thistle seed)

3) Milk Fever

- a) I.V. Calcium/Dextrose (also use Vitamin C to assist calcium transport)
- b) Calcium Drench with Calcium (lactate, acetate, propionate, oxide); Magnesium (oxide sulfate); Vitamin D; Phosphorous (Calcium phosphate); zinc (sulfate, chelate); cobalt (sulfate chelate); B-12

4) Udder Edema

- a) Inject Vitamins: B-6, B-12

- b) Diuretic Herbs: dandelion leaf/root, celery seed, juniper berries, gravel root, cleavers
- c) Massage udder with "hot" liniment (camphor, peppermint, capsicum, etc)
- d) 1 pint of strong coffee

5) Calf Scours

- a) Use demulcent herbs like psyllium, comfrey, slippery elm, mallow; astringent herbs like raspberry leaf, blackberry root bayberry; anti-microbial herbs like oregon grape, bearberry, peppermint, eucalyptus, garlic, thyme
- b) Activated carbon, clays (montmorillonite, bentonite, attapulgitite, etc.)
- c) Electrolytes with buffers
- d) Probiotics/enzymes
- e) Colostrum whey

6) Foot Rot

- a) Correct acidosis with minerals/fiber
- b) Increase iodine, zinc and sulfur
- c) Topical foot bathe with copper and zinc sulfate, and iodine
- d) Good pasture - grass factors & nutritional/medicinal herbs

7) Reproduction Problems

- a) Correct acid/alkaline balance
- b) Address M.U.N./B.U.N.
- c) Adequate A, E, copper, cobalt, zinc, iodine, B-complex, selenium, iron(?)
- d) "Grass Factors" - enzymes, carotenoids, Vitamin E, trace minerals, nutritional & medicinal herbs

8) Respiratory Problems

- a) Inject A, E, C, B-complex vitamins
- b) Hydrogen Peroxide (Food Grade) drench
- c) Inject Colostrum Whey
- d) Herbs: Hyssop, eucalyptus, peppermint, thyme, fennel, fenugreek, garlic, elcampane
- e) Remove animals to draft free well bedded outside environment !
- f) Provide laxative, cleansing diet with bran, beet pulp, molasses mash; grass/hay

9) External Parasites

6 drops of essential oils of eucalyptus, citrus, thyme, melaleuca to 1/2 pint of vinegar, 1/4 pint turpentine, 1/4 pint linseed oil. Apply by rubbing & spraying.

10) Internal Parasites

Intensive rotational grazing; free choice minerals; force feed 4-8 oz. Diatomaceous Earth/head/day @three (3) weeks on, three (3) weeks off. Non-swelling montmorillonite @ 4-8 oz/head/day.

Herbs: garlic, clove, wormwood, wormseed, black walnut hulls. (Give at waxing of the moon).

Jerry Brunetti is a livestock consultant, feed formulator, and Director of Agri-Dynamics, selling herbal formulations, vitamins and minerals for livestock operations. He is often a speaker at the annual ACRES-USA conferences, and leads workshops on soil fertility, animal health and nutrition and medicinal herbs