

HELPFUL HINTS FOR TREATMENT OF ORGANIC DAIRY COWS

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This guide is intended for veterinarians. Professional clinical judgment is often needed when assessing each case presented. As veterinarians know, there easily can be two or three conditions occurring simultaneously with cumulative effects on the patient. The severity of symptoms should serve as a guide as to what kind of treatment is necessary for the well-being of the animal i.e. is there time enough so we can try natural treatments and wait for a response? Or is there an absolutely life threatening infection (i.e. generalized peritonitis) that necessitates antibiotics for the welfare of the animal? This is where clinical judgment is paramount and this is based not only on previous experience but also professional medical training. There is a difference between general welfare of the herd and individual animal welfare. This guide is for individual animal welfare. The protocols outlined below try to be as concise and simple as possible, relying on a handful of biologics, botanicals, antiseptics and fluid therapies that all have a rational basis in therapeutics.

It should be noted that farmers will often have homeopathic remedies and many other natural remedies often found on organic farms that are usually OK for organics. Many times the farmer has already used his/her remedies but they need stronger medicine – thus calling in the veterinarian (“whatever it takes doc, just no antibiotics or hormones please”). This simple “cookbook” serves this purpose.

If the conscientious and busy veterinarian has the following protocols ready to use, there is no need to learn about the myriad of other treatment modalities in detail unless the individual genuinely finds natural treatments interesting (which may well be the case!).

The following items can easily be added to a veterinarian’s regular tools or dispensed to a farmer. These have all been tested by me over a number of years with reasonable success, especially when called to tend the animal in a timely manner. These products are mentioned throughout the Guide, which follows this product listing.

PHYTO-MAST – TO SUPPORT UDDER HEALTH

PHYTO-MAST is a mixture of botanical oils and vitamin E that can be infused into a quarter, only under the direction of the local veterinarian. These are presented in standard white 15cc plastic intramammary infusion tubes, 12 to a box. PHYTO-MAST is intended to be used as an antiseptic irrigation when milk quality is a concern. Any milk of concern should be expressed between milkings to clear out the udder. This product is not intended for Staph aureus or hot coliform mastitis. PHYTO-MAST may be considered for cows that have milk quality concerns at dry off. Any infused quarter should not be put into the bulk tank during the administration period and for 24 hours afterward. Animals should not be sold for slaughter during treatment or for 3 days afterward. All the **ingredients** of PHYTO-MAST are GRAS (Generally Recognized As Safe): Angelica spp., Mentha sp., Glycyrrhiza sp., Thymus sp. in canola oil and Vit. E.

PLASMA – FOR PARENTERIC NUTRITIONAL NEEDS

A highly purified plasma derived from organic cows that have experienced a natural infection of coliform mastitis or clinical pneumonia and have been further stimulated repeatedly. Sterility guaranteed through microbiology quality control laboratory. Source animals are test negative for BLV, BVD and Johnes. PLASMA is indicated for times when other cows or calves may be experiencing problems due to the effects of certain germs. This product is different from other over the counter products in that there are no red cells in it, hence it can be considered for IV administration if desired (but always have epinephrine ready). A bottle is simply poured into the funnel of a simplex device.

PLASMA is produced in 100cc bottles. Generally 200cc are recommended for an adult cow and 100cc for youngstock. Depending on condition of animal, a bottle can be given subcutaneously or intramuscularly the next day.

HEAT SEEK - FOR REPRODUCTIVE HEALTH

A botanical blend of herbs that enhances the visually observable signs of estrus.

For use in animals which are in normal body condition, have a CL on the ovary, and have not shown visible for long periods of time. Capsules for oral administration: 1 capsule daily for 6 days in a row or until heat, whichever is first. Also for cystic ovaries: 1 capsule daily for 12 days in a row or until heat, whichever is first. Many times estrus will be observed prior to final dose—discontinue administration and breed. Sometimes animals will show heat a few days after the final (6th) dose. Cows treated with HEAT SEEK tend to settle well. Occasionally, a cow will show a heat after the final administration of HEAT SEEK and be bred but then show a flaming heat 3 weeks later. Breed again. This product is not for cows in negative energy balance.

Ingredients – Turnera diffusa, Dioscorea villosa, Mitchella repens, Actea racemosa, Viburnum opulus, Angelica sinensis, Oenothera biennis, Linum usitatissimum, vit B6

PHYTO-BIOTIC - TO ENHANCE HEALTH

A liquid tincture of plants that have well known antibacterial properties. PHYTO-BIOTIC can be used as an oral treatment or can be given IV as a loading dose when called out to tend to the animal. (It needs to be added to a diluent carrier such as dextrose or physiologic saline.) Oral dose of PHYTO-BIOTIC is 5cc/ calf and 20cc/ cow given 3 times daily. When administered with other IV fluids, a 90cc dose is given one time (The literature has documented methods of giving herbal infusions intravenously to human patients in China). This is a good adjunct treatment and/or follow-up for animals that received Plasma C.

Ingredients: Allium sativum, Panax ginseng, Hydrastis canadensis, Baptisia tinctoria, Berberis vulgaris

GET WELL - TO ENHANCE HEALTH

This is a dry, powdered version of the PHYTO-BIOTIC described above. Some farmers prefer to give capsules instead of liquids. Given as a follow-up to a loading dose of PHYTO-BIOTIC. The GET WELL should be given at a rate of 2 capsules twice daily for 5 days.

Ingredients: Allium sativum, Panax ginseng, Hydrastis canadensis, Baptisia tinctoria, Berberis vulgaris

PHYTO-GEST - TO ENHANCE DIGESTION

A liquid tincture of plants known to stimulate appetite and gut motility. Indications would be mild bloat, constipation, impacted rumen, potential displaced abomasum. This can be given at the rate

of 15-20cc/ cow (or horse) or occasionally at 5-10cc IV with a diluent such as dextrose or physiologic saline. **Ingredients:** Gentiana lutea, Zingiber officinale, Nux vomica, Foeniculum vulgare

JUMP START - TO ENHANCE DIGESTION

This is basically a dry, powdered version of the PHYTO-GEST. It has a slightly altered composition. JUMP START can be given at a rate of 2 capsules twice daily as needed. All ingredients are GRAS

Ingredients: Gentiana lutea, Zingiber officinale, Capsicum annum, Paullinia cupana, and sodium bicarbonate.

OTHER PRODUCTS THAT I RECOMMEND FOR ORGANIC LIVESTOCK

(and can be ordered through regular veterinary distribution suppliers):

Immunoboost® (stimulates non-specific immune system via γ -interferon)

EPIC Calf-Scour Formula®

Colimune- Oral® (for colostrum replacement)

BoSe®

MuSe®

Reassure® (for potential fatty liver problems)

SelPlex®

Bio-Mos®

Vitamin C

Electrolytes (calcium products, lactated ringers solution, hypertonic saline, etc.)

Activated Charcoal (made from vegetable sources only)

Electrolytes heavily spiked with glycerin (as an excipient)

GUIDE FOR DIAGNOSED CONDITIONS

Coliform Mastitis

IV Dextrose with 60-90cc PhytoBiotic (herbal antibiotic tincture), 200cc Plasma or commercial PolySerum/BoviSera, 2 bottles Vitamin C, 1 CMPK (depends on age), 1-2 L Hypertonic Saline solution (HSS). The PhytoBiotic and Plasma are the “active medicines” the others are more of a support. Pump stomach if animal does not drink after IV HSS. This is critical as fluids will be drawn from other compartments to address hypertonicity in the bloodstream. However, if a cow does not drink after IV HSS, the prognosis for systemic recovery is worse i.e. toxicity may have passed a critical threshold.

The Plasma needs to be warmed up rapidly in hot water (but not *too* hot) in order to dissolve any possible fatty molecules. Pour it into the funnel of the IV line. Put it in just after the bottle of Dextrose & PhytoBiotic combination. Plasma can be given SQ, IM or IV while BoviSera or PolySerum given IV has the real risk of anaphylaxis (have epinephrine on hand – OK for organics). I dispense 20 capsules Get Well (herbal antibiotic powders) as a follow-up to the IV treatment in infectious diseases in general. Rx: PO 2 bid x 5 days. The farmers usually have some type of peppermint essential oil product to rub on the quarter as needed.

On bill, write down Dextrose, herbal “antibiotic” tincture (PhytoBiotic), Vitamin C and electrolytes and herbal “antibiotic” powders (Get Well boluses).

Pneumonia

Same as coliform mastitis, minus the hypertonic saline and CMPK. The BoviSera or PolySerum is available as is the Plasma.

Scours

If they eat normally, this is pretty easy to clear up: Rx: feed no ensiled feeds, feed only dry grass hay and give probiotics of choice. This should normalize the rumen and gut unless Johnes is presenting. If pumping the stomach, PO Mineral oil as a lubricant and activated charcoal to adsorb toxins, in 5 gallons of water with electrolytes. The mineral oil is not absorbed by the gut and acts as a lubricant (write “mineral oil as lubricant” for medical record). Any activated charcoal used has to be from vegetable derived sources, not derived from bone meal. The product available from PVP is such. The Blue-Lite is just a commercial name for salts and sugars (electrolytes) which are OK for organics.

If suspected **Salmonella**, treat with fluids same as for Coliform Mastitis, definitely using the Plasma (IV or SQ) or BoviSera/PolySerum and dispense the Get Well boluses.

Ketosis

IV Dextrose with B vitamins if you like. Dispense oral electrolytes heavily spiked with glycerin (glycerin as an excipient). Rx: PO 8 oz. twice daily as needed. The glycerin must be vegetable derived (then it is considered natural and OK for organics).

Off-feed (not a twist)

Give IV calcium (depending on age +/- associated milk production, etc) and dextrose if needed. Call the calcium “electrolytes” to avoid red-flagging by certifiers. Pump stomach with the alfalfa meal and open up 4 Jump Start (herbal bitters powders) capsules into bucket to pump from. Dispense 16 Jump Start capsule Rx: PO 2 caps. Bid x 4 days.

Twisted Stomach/ DA

Do the surgery. I use 1-1.5cc xylazine IV to drop them, and then I give 1cc butorphanol IM once they are rolled up. Lidocaine is allowed but it is a 7 day milk withhold, which most guys don't mind terribly. But the Xylazine and butorphanol are only 48-72 milk withholds. Can use tolazoline to reverse if using xylazine.

Impacted Rumen

Pink pills are OK (Magnesium oxide/hydroxide). They also contain ginger and capsicum. Pump stomach with fluids and mineral oil (as a lubricant). Farmer can follow up with probiotic of choice (farmers almost always have them).

Calf Scours (can stand)

100 cc Plasma SQ and leave a bottle to give in 24-48 hours (or use BoviSera / PolySerum). EPIC Calf Scour formula ® 3-4 times daily as needed. 3cc/100 lbs BoSe® and 1cc/200 lbs Immunoboost®.

Calf Scours (down, significant dehydration)

100 cc IV (or BoviSera/ PolySerum SQ/IM), then IV 800cc lactated ringers/100cc Bicarb/100cc dextrose if possible. EPIC Calf Scour formula® (electrolytes) follow up PO. Dispense tube feeder if needed and show how to use it properly. Farmer should feed calf 3-4 times daily to re-hydrate.

Calf blindness (PEM)

20cc Thiamine IV and dispense thiamine for 20cc IM b.i.d. x 4 days. Careful for anaphylaxis (have epinephrine ready – OK by federal law for organics)

Umbilical abscess

Aspirate first to make sure it is an abscess then open and drain and flush with peroxide. I usually make an "X" mark on the most ventral point to allow gravity drainage. Farmer can spray area closely to saturate with iodine tincture (OK for organics)

Retained Placenta

Remove if possible at 5 days fresh when it wants to slide out (not usually possible prior to 5 days). I then place 4 iodine pills. Can repeat 3-4 pills I.U. SID or BID. as warranted. These are easily accessible (I-O-Dine pills from PVP) and cheap to use. Calvings due to twinning, hard extraction or aborted early will always take longer for the placenta to tease out. Never snap the placenta as the remainder will stay in the uterus and the cervix will close without any placenta coming through it. It is necessary to be "aggressive" in keeping the uterine environment as antiseptic as possible during the first 10-18 days if a metritis is present. Failure to do so easily leads to a chronic pyometra which, in my experience with various attempts at cleansing and correcting, will lead to removal of the cow due to chronic uterine infection and infertility.

Mastitis

If clinical, I usually dispense PhytoMast tubes (1 tube q12h x 4) and recommend Biocel CBT (30cc SQ s.i.d. x 3 days). Injecting the SQ shots at the reflection of the udder and the leg on the side of the mastitis may be better (acupuncture point K10)

High SCC

This of course can be due to environmental stresses or internal immune suppression. Culture to see if contagious or environmental etiology. General approach is to use Biocel CBT as described

above (or other colostrum whey products like Impro injectables). Immunoboost® stimulates the non-specific immune system (IFN- γ) – 5cc IM one time can drop SCC for up to 2 months (good to remember for drying off certain cows). MuSe injection once weekly for a few weeks (2cc/100lbs SQ/IM).

Pink Milk

IV Calcium (electrolytes) and 1 bottle Vitamin C. Vitamin K 100cc SQ one time. Keep the cow from moving about.

Cut teat or cut milk vein, etc.

Sedate and stitch. Give lactated ringers, 2-3 L, IV (electrolytes) or transfuse if need be.

Killing a quarter

Use 60cc Nolvasan in quarter for 4 milkings in a row without stripping out. Using iodine can cause a pretty severe inflammatory reaction in the quarter and concomitant use of flunixin is recommended in the literature.

Hardware

Magnet and PhytoBiotic and good luck. Farmers rarely go for the antibiotic on these. There seems to be strong faith in the magnet and PhytoBiotic, though I have much stronger faith in penicillin in obvious hardware cases.

Peritonitis

It is not always easy to diagnose peritonitis. I usually consider it when there is a low grade fever (102.6-103) and there is no other obvious cause of the fever but the cow is off-feed and the rumen is inactive resulting in a very mild bloat. Seeing a full or bloated appearance bilaterally is more significant yet. If on rectal palpation it is obvious that the colon is straight and turgid, a presumptive diagnosis of generalized peritonitis can be made. For the animal's welfare, penicillin is the most effective treatment. Sometimes there may be a more localized peritonitis due to a septic metritis and resultant peri-metritis with leakage of septic fluid into the local area. Sometimes this condition is found incidentally during a herd check (not active infection, just the adhesions between the uterus and rumen or body wall are detectable. These adhesions usually take about 5 months to "free-up" and the cow may become pregnant after that time. However, if it is in the peri-parturient time, an active peri-metritis can lead to a generalized peritonitis but then again it may not. These animal needs to be watched very closely and be put on penicillin within 24-36 hours if no improvement with iodine pills IU and other treatments for infectious disease (see Coliform Mastitis).

Pasture Bloat (usually these are just a phone call type situation)

1 pint vegetable oil, walk the cow around, repeat 1 pint vegetable oil in 15 minutes. Usually works fine except if they are really too far into it. (ed. note: poloxalene is now allowed by the Rule).

Grain Overload

Activated charcoal and mineral oil with not much water (if first 12 hours). IV Bicarb, 300cc, and lots of lactated ringers (2-4 liters).

Colic

1 gallon mineral oil + flunixin. If tight mesenteric band palpable, advise that a torsion may occur and if no better within 8-12 hours, surgery will probably be needed. More often than not, scours will have occurred. Allow the animal to walk around freely (i.e. do not tie into a stall).

Blood loss (due to cut milk vein, etc. – not internal bleeding)

IV lactated ringers (4-5 liters if needed). Transfusion if really needed – can only use citric acid for the anticoagulant. While heparin was voted to not be allowed by NOSB, since epinephrine has been deemed as natural by FDA (and therefore allowed by NOP), heparin should actually also be since it is derived directly from porcine gut mucosa. However, stick with citric acid if possible.

Internal parasites

Ivermectin is allowed for an emergency/infestation if diagnosed by a veterinarian (usually good to run a fecal). Amprolium is not allowed. If a mixed infection (strongyles and coccidia) treat for the strongyles and then also dispense Hematinic Rx: PO 10-15cc s.i.d. x 7 days.

External Parasites

Sulfur powder worked in to area or mixed with tobacco dust or diatomaceous earth. Repeat in 7 days to get the nits which hadn't hatched out yet.

Pinkeye

2-3cc of animal's own serum or HIP as a subconjunctival injection one time. Sedate with xylazine and butorphanol. Could do an eyelid flap suture. Can spray affected eye with serum/plasma as well.

Allergic reaction

Epinephrine. Tripleenamine (Recovr®) is not allowed

Lumpy Jaw

Sodium iodide IV, repeat weekly for 3 weeks. Best to also use 500cc dextrose with 90cc PhytoBiotic and 250-500cc Vitamin C at initial treatment. Farmer can follow-up with 15cc PhytoBiotic PO t.i.d. x 3-4 days.

Abscess

Open and flush with hydrogen peroxide.

Foot Rot

Cleanse area with H₂O₂ and then Iodine tincture. Then mix just enough Betadine (Povidone iodine) with sugar to make thick paste and apply. Repeat in 2-3 days. Same for a strawberry but make sue that the most superficial layer of the strawberry is "peeled away" or abraded so paste has good contact. Repeat the cleanse and wrap in 3-4 days.

Cow not showing heat but good body condition and a CL on ovary

Use Heat Seek botanical (herbal fertility powder) boluses. 1 capsule every other day for 6 doses

Cystic

Try to gently rupture. Or, same as above but double the length of treatment time for 12 doses. Or can inject 5cc vit. B12 in the depressions in the intervetebral areas of the paravertebral ribs (short ribs). These are acupuncture points specific for cysts.

Pyometra

If found in cow fresh >2 months, bad news. Nothing works except possibly manual removal of CL. If prior to 30-40 days, using 20cc Iodine Tincture (7%) with 40cc Hypertonic saline (electrolytes) could help.

YOU CANNOT USE ANTIBIOTICS, DEXAMETHASONE, PG, GnRH ...without removal from herd - FOREVER.

Flunixin, xylazine, tolazoline, butorphanol, furosemide, poloxalene are now allowed, but only for emergency situations.