

DOES LOWERING CHOLESTEROL REDUCE HEART PROBLEMS ?

The first long-term Framingham Study, which started in 1947, involved over 5,000 adults living in the town of Framingham, Massachusetts. Its initial findings identified major risks of developing cardiovascular disease as being elevated blood pressure, smoking tobacco, obesity, lack of exercise, and elevated blood cholesterol. Based largely on the latter result, for over 50 years most dietary guidelines have recommended reducing animal-derived saturated fat and increasing amount of plant sources. This recommendation is based on the cholesterol-lowering effect of linoleic acid in plant-based diets.

A recent paper re-examined unpublished data from a study in Minnesota from 1968 to 1973; it involved 9,570 people living in mental hospitals and nursing homes, where diet could be strictly controlled. In this study, a diet containing vegetable oil decreased saturated fat from 18.5 % to 9.2 % of calories and increased linoleic acid from 3.4% to 13.2% of calories. The paper also examined results of all other available randomized controlled trials comparing effects of saturated fat with linoleic-rich oils.

The authors noted that the elevated linoleic acid diet had some polyunsaturated margarine likely containing some trans fat. But, based on the data from Minnesota and other relevant studies, the current paper found:

- elevating linoleic acid levels did lower serum cholesterol;
- but elevating linoleic acid levels did not lower death rates, from coronary heart disease or any other cause;
- so, merely lowering cholesterol did not reduce death.

They concluded that “the Minnesota Coronary Experiment findings add to growing evidence that incomplete publication has contributed to overestimation of benefits, and underestimation of potential risks, of replacing saturated fat with vegetable oils rich in linoleic acid”.

(British Medical Journal 2016, 353:i1246. <http://www.bmj.com/content/353/bmj.i1246> ; Nat. Inst. of Health, Univ. of North Carolina, Medtronic, Inc., Mayo Clinic, Univ. of Illinois.)

BQA (BEEF QUALITY ASSURANCE) TIP-OF-THE-MONTH: RESIDUES

Always refer to the product label for specific guidelines for proper use of each product. To avoid residues from anthelmintics (de-wormers), make sure cattle are not marketed until slaughter withdrawal times have passed. Slaughter withdrawal times vary by both chemical ingredient and method of application; the table below illustrates this concept for a few of the available injectable and pour-on macrocyclic lactone products.

Product	Pour-on	Injectable
Cydectin®	0 days	21 days
Dectomax®	45 days	35 days
Ivomec® Eprinex	0 days	—
Ivomec®	48 days	35 days



Rangeland Weed and Brush Control

Common Herbicides		
Herbicide common name	Product name	Active ingredient or acid equivalent
Clopyralid	Reclaim	3 lbs./gal.
2, 4-D	several	Variable
Dicamba	Banvel	3 lbs./gal.
Dicamba:2, 4-D (1:4)	Weedmaster	4 lbs./gal.
Hexazinone	Velpar L	2 lbs./gal.
Metsulfuron	Ally or Escort	60%
Picloram	Grazon PC	2 lbs./gal.
Picloram:2, 4-D (1:2.87)	Grazon P+D	2.5 lbs./gal.
Tebuthiuron	Spike 20P	20%
Triclopyr	Remedy	4 lbs./gal.
Triclopyr:2, 4-D (1:2)	Crossbow	3 lbs./gal.

Calibration of Boomless/Clusterjet Nozzle Sprayers:

- Fill spray tank with water to a marked level
- Drive in a straight line for 660 feet, operating the sprayer at a constant pressure and speed.
- Refill the tank to the original level to determine the number of gallons used.
- Measure the width (ft.) of the area sprayed.
- Calculate as follows:
 $(\text{gallons used} \times 66) / \text{width of sprayed area (feet)} = \text{gallons sprayed per acre}$
 $\text{tank capacity (gallons)} / \text{gallons sprayed per acre} = \text{acres sprayed per tank}$
- Add the appropriate amount of herbicide to the tank and fill.

Calibration of Boom Sprayers:

- Record the time required to travel 100 feet under spraying conditions.
- Record the number of ounces sprayed from one nozzle for the length of time required to drive 100 feet.
- Calculate as follows:
 $(40 \times \text{ounces sprayed}) = \text{nozzle spacing (inches)}$
 $\text{tank capacity (gallons)} / \text{gallons sprayed per acre} = \text{acres sprayed per tank}$
- Add the appropriate amount of herbicide to the tank and fill.

Basal Bark Application Techniques

- Conventional basal:
Apply diesel fuel oil, kerosene or a herbicide/diesel fuel oil mixture (2 to 4 percent herbicide) to the lower 12 to 18 inches of the trunk of a brush plant. The solution is applied completely around the trunk with sufficient volume to allow runoff and puddling a the soil surface.
- Low-volume basal:
Apply a mixture containing diesel fuel oil plus 15 to 25 percent herbicide, or diesel fuel oil plus 15 to 25 percent herbicide to wet the lower 12 to 18 inches of the trunk completely around, but not to the point of runoff.
- Streamline basal:
Apply a mixture containing diesel fuel oil plus 15 to 25 percent herbicide, or diesel fuel oil plus 15 to 25 percent herbicide and 10 percent penetrant, in a band (3 to 4 inches wide) completely around the trunk near ground level.



Herbicides for Home Lawns

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Active Ingredient	Pre/Post Emergent	Controls	Notes	Found In
2,4-D	Post	broadleaves	Will not control clovers. St. Augustinegrass can be sensitive	Weed-B-Gon, weed-n-feed products, many others
MCPA	Post	broadleaves	Usually combined with 2,4-D to increase weed control	Weed-B-Gon, weed-n-feed products, many others
mecroprop-p (MCP)	Post	broadleaves	Usually combined with 2,4-D to increase weed control	Weed-B-Gon, weed-n-feed products, many others
dicamba	Post	broadleaves	Can be absorbed through roots; do not apply near shallow-rooted trees. Usually combined with 2,4-D to increase weed control of clovers.	Weed-B-Gon, weed-n-feed products, many others
triclopyr	Post	broadleaves	Better control of clovers than 2,4-D, MCPA, MCP	Ortho Brush Control, Ortho Poison Ivy, Bonide Chickweed Killer, many others
penoxsulam	Post	broadleaves	Safe to most turfgrass species. Will take 2-3 weeks before weed death occurs. May not control larger weeds when applied alone	Fertilome Dollarweed Control
metsulfuron	Post	broadleaves	Can be absorbed through roots; do not apply near shallow-rooted trees. Excellent control of many broadleaf weeds, limited control of others. Will take 2 to 3 weeks before weed death occurs	Certain Scotts Bonus S products
carfentrazone	Post	broadleaves	Gives a quick "burn down" effect on broadleaves but not grasses.	Usually mixed with other herbicides.



Active Ingredient	Pre/Post Emergent	Controls	Notes	Found In
sulfentrazone	Post	yellow nutsedge, broadleaves	Will provide yellow nutsedge control but provides poor control of purple nutsedge. May cause temporary necrosis to St. Augustine that looks like gray leaf spot but mows out	Ortho Nutsedge Control, Bonide Sedge Ender
imazaquin	Post	nutsedge	Provides good control of yellow and purple nutsedge.	"Image Kills Nutsedge"
quinclorac	Post	certain grasses, clovers	Will provide crabgrass control. Also provides excellent clover control. Do not apply to St. Augustinegrass	Products that mention crabgrass control. Usually mixed with 2,4-D and other broadleaf herbicides
atrazine	Pre/Post	grasses, broadleaves	Provides control of many grassy and broadleaf weeds. For use in St. Augustinegrass and centipedegrass only	"Image for St. Augustinegrass and Centipedegrass", certain Scotts Bonus S products
dithiopyr	Pre	grasses, some broadleaves	Safe for use on all turfgrass species. Do not use in the spring when recovering from winter injury.	Bonide crabgrass preventer, many others
pendimethalin	Pre	grasses, some broadleaves	Safe for use on all turfgrass species. Do not use in the spring when recovering from winter injury.	Scotts Step 1, Pre-M, many others
isoxaben	Pre	broadleaves	Can be used on all turfgrass species	Gallery, Fertilome Broadleaf Weed Control with Gallery
corn gluten meal	Pre	grasses	Control is inconsistent	Bonide MAIZE Weed Preventer, many others
glyphosate	Post	broadleaves, grasses	Non-selective herbicide. WILL KILL TURFGRASS. Will not provide nutsedge, morningglory, or dayflower, control at lower rates	RoundUp, many others
diquat	Post	broadleaves, grasses	Non-selective herbicide. WILL KILL TURFGRASS.	Usually mixed with glyphosate

Hopefully everyone has been enjoying the spring rains we have been receiving as of lately, and will begin the summer growing season with a good start to their forage production. The higher levels of rainfall do provide a few issues that I would like to point out.

First, the increased number of mosquitos that we are seeing due to an abundance of ideal habitat areas for them to hatch, try to be diligent in removing standing water when possible to disrupt these hatching areas, stacked tires are a great example of this type of environment. When you will be outdoors protect yourself from bites with spray containing N,N-Diethyl-meta-toluamide (DEET) to help keep mosquitos at bay. Check the DEET concentration level to determine the length of effectiveness that the particular product contains. Higher levels of concentration determine how often the repellent should be re-applied, but doesn't predict the effectiveness.

Secondly, with the higher rainfall we will realize a higher level of forage production for livestock and hay in total pounds produced on a per acre basis. However, I would caution you to monitor your cattle body condition score and hay quality closely. The forage produced in high moisture periods is generally significantly lower in protein and mineral levels than is common, and at times will cause an increase in mineral consumption as well as a loss in body condition score. Many times we are guilty of driving through our pastures and evaluating available forage by the amount of green coloring that is noticeable.

I would recommend taking a close look at what is growing in your pastures. Several places I have been out on have been green and lush from first look but upon a closer inspection most of the green forage that is present is cool season annuals that are very near the end of their life cycle.

In closing, good luck with you agriculture enterprises, and if I can be of assistance to you please don't hesitate to call, email, or stop by the office.

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