



## Bonner County Gardeners Association Education ~ Community Service ~ Camaraderie

May 2015

Please contribute to The Garden Gate. Informational articles, garden tips, announcements, and digital photos are welcome. For questions or comments please email [lauriebrown54@gmail.com](mailto:lauriebrown54@gmail.com) When emailing, please put "MG" in the subject line.

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### President's Message

This month I am going to talk about organic vs chemical fertilizers. Is there a difference between them or how they act in soils? Is there a difference in how they affect plant nutrition? I suspect that this may start a discussion or dialogue between our members. If so, good!

I know that many of you are organic gardeners. What does that mean to you in terms of fertilizers and plant nutrition? When it comes to food, the standards for food processing do not take the source of the plant nutrients, whether they be organic or chemical, into consideration. To plants, nutrients are nutrients regardless of their source in the soil and once in the plant there is no way to distinguish from where they came.

Notice first that I use the term "chemical" rather than "inorganic" when I refer to manufactured fertilizer. There are lots of terms used when talking about fertilizers: organic, inorganic, natural, artificial, synthetic, manufactured. The differences between fertilizers is really about the amount of processing with organic or natural undergoing a more limited amount of processing than chemical fertilizers.

Here is a label from a common fertilizer marketed as organic and 100% natural:

GUARANTEED ANALYSIS:		ALSO CONTAINS NON-PLANT FOOD INGREDIENTS:	
Total Nitrogen (N)	5%	Bacillus subtilis	Propagules / cc 1430
5.0% water insoluble organic Nitrogen		Bacillus cereus	1430
Available Phosphate (P <sub>2</sub> O <sub>5</sub> )	7%	Bacillus megaterium	1430
Soluble Potash (K <sub>2</sub> O)	3%	Azotobacter vinelandi	75
Calcium (Ca)	7.96%	Lactobacillus acidophilus	1430
Sulfur (S)	2.08%	Rhizobium japonicum	750
		Aspergillus oryzae	75
PRIMARY & SECONDARY NUTRIENTS DERIVED FROM:		MYCORRHIZAE:	
Fish bone meal, feather meal, kelp meal, alfalfa meal, soft rock phosphate, fish meal, mined potassium sulfate and seaweed extract.		Propagules / cc Propagules / cc	
<b>STORE</b> in a dry cool place. Avoid direct sunlight.		• <i>Ectomycorrhizae</i> • <i>Endomycorrhizae</i> (VAM)	
<b>EXPIRATION DATE:</b> Best if used before 10/15/17 10+		Pisolithus tinctorius ..... 211,864 Glomus intraradices ..... 42	
		Rhizopogon villosuli ..... 5.296 Glomus mosseae ..... 42	
		Rhizopogon luteolus ..... 5.296 Glomus aggregatum ..... 42	
		Rhizopogon amylopogon ..... 5.296	
		Rhizopogon fulvigleba ..... 5.296	
		Contains 10% Humic Acids (derived from Leonardite)	

Note where the nutrients come from. They include rock phosphate and potassium sulfate. These are naturally occurring "inorganic" minerals. They are mined. The other ingredients are organic but even they have undergone some level of processing and in the case of alfalfa and feather meal and possibly bone meal may have even involved being raised with non-organic nutrition. Note also that the amount of nutrients as represented by the N-P<sub>2</sub>O<sub>5</sub>-K<sub>2</sub>O formulation is rather minimal at 5-7-3, and this is common among organic fertilizers.

Chemical fertilizers are derived from the same mined resources, rock phosphate and various potassium minerals and sometimes ammonium nitrate. However, these minerals commonly are subjected to additional manufacturing that increase their nutrient content. In the case of ammonium nitrogen compounds they are most commonly manufactured from natural gas. Chemical fertilizers are generally much more concentrated in terms of their N-P<sub>2</sub>O<sub>5</sub>-K<sub>2</sub>O formulation and can be formulated in a variety of formulations for different applications.

So, in terms of practical use in our gardens, what are the advantages and disadvantages of both? Generally, they relate to rate of release and availability of nutrients to plants as well as addition or depletion of organic matter to soils. In conventional agriculture, as farming systems have gone away from crop rotation to continuous corn and/or soybeans with increased use of chemical fertilizers the result has been depletion of organic matter in soils with commensurate influence on desirable soil properties like water holding capacity, compaction, and erosion resistance. Garden plots are less likely to suffer these influences as we generally add organic matter in various forms to improve our soil. The case can be made that one of the benefits of using organic fertilizers is that they add organic matter to soils. While this is true the amounts of organic matter added is relatively small compared to the amount of compost or manure typically added.

Organic fertilizers generally have slower rates of nutrient availability than chemical fertilizers and this relates primarily to nitrogen. In order for nitrogen to be taken up by plants it must be in the form of either ammonium or nitrate. Nitrogen combined in organic compounds like meal, kelp, compost or manure must undergo breakdown by fungi and bacteria, etc. in order to be liberated as ammonium. In contrast most chemical fertilizers dissociate directly into ammonium ions in soil. The exception is urea which can be formulated as a slow release "chemical" nitrogen fertilizer. Subsequently, whether derived from organic or chemical sources, the ammonium is either taken up directly by plants or converted to nitrate by specific genera of bacteria. There is ongoing discussion of whether some plants "prefer" nitrogen in ammonium vs nitrate form. In some soils, especially those that are sandy, rapid ammonium and especially nitrate availability, could lead to leaching from the root zone if there is excess rainfall or irrigation. As such, it is of no benefit to plants.

The bottom line is that if your plants are indicating nitrogen deficiency, chemical fertilizers are going to provide more rapid availability than organic fertilizers. For long term soil nutrient content the difference is minimal.

That brings us to cost. Going organic is more expensive, period! A four pound box of the organic fertilizer whose label was cited above costs about \$10, and it has only seven pounds of nitrogen per 100 lbs. of fertilizer. On the other hand, \$20-\$25 will buy fifty pounds of most commonly formulated chemical fertilizers, 10-10-10; 16-16-16; or 16-20-0-14.

Another word about the organic label above. It indicates it contains propagules of various bacterial and fungi and implies that they are beneficial. They are, but most soils already have abundant bacteria and fungi ready to respond to any addition of organic matter.

May your garden thrive regardless of where the plants get their nutrition!



*BCGA raffle basket: tickets are available from board members up until June 9 at the Sip and Shop event at Pend Oreille Winery. We'll draw the winning ticket then.*



# une Gardening To Do List



- Set up trellises to support pole beans, morning glories and cucumbers
- Remove newest shoots from geranium plants to encourage fuller plants
- Plant new lawns and fertilize and aerate established lawns
- Plant container roses, shrubs and trees in well-amended soil
- Divide and transplant spring-flowering perennials that have finished blooming
- Protect cole crops (cabbage, broccoli, kale) from egg-laying cabbage white butterflies with insect-barrier cloth
- Weed asparagus and strawberry beds
- Remove new flower buds from chrysanthemums and carnations to coax bigger blooms

## Zone 3

- Set out seedlings of warm-season annuals and vegetables
- Plant summer-flowering bulbs
- Weed asparagus and strawberry beds
- Put up trellises or netting for peas, pole beans and flowering vines
- Divide and replant spring-blooming perennials after the flowers fade
- Plant container roses
- Fertilize and aerate lawns
- Plant balled-and-burlapped and container trees, shrubs and vines
- Apply sulfur to control fungus problems on apple trees, roses and grapevines
- Pinch off first flower buds on chrysanthemum and carnation plants to coax bigger blooms
- Protect cole crops (cabbage, broccoli, kale) from egg-laying cabbage white butterflies with insect barrier cloth
- After their leaves yellow and dry up, divide and transplant crowded spring bulbs

## Zone 4

- Plant seedlings of warm-season annuals and vegetables
- Sow seed of fast-growing, heat-loving herbs, vegetables (basil, squash, melons) and flowers (nasturtiums, zinnias) directly in ground
- Thin out small green fruits on apple, peach and plum trees to one every 6 inches on the branch
- Dust potato plants to prevent infestations of potato beetle

## Zone 5

- Divide and transplant spring-flowering perennials that have finished blooming
- Harden off and plant seedlings of warm-weather vegetables and flowers
- Thin out small green fruits on apple, peach and plum trees to one every 6 inches on the branch
- Sow seeds of perennials directly into the ground
- Dust potato plants to prevent infestations of potato beetle
- Pinch newest shoots on geranium plants to encourage fuller plants
- Train your lawn to grow deep roots; Mow often, at a high setting
- Plant balled-and-burlapped and container shrubs and trees
- Feed roses as the first flower buds appear; apply fungicide to prevent powdery mildew or blackspot
- Weed asparagus and strawberry beds
- Feed young corn plants with high-nitrogen fish emulsion fertilizer
- Mulch flower and vegetable gardens to conserve water during heat waves



*“When you open up the earth even for a mere cabbage patch you always feel like the first man, the master, the husband with no rival. The earth you open up has no longer any past- only a future.”*

Colette, French novelist



*L to R: Diana Leake, Bob Blair, Ann Warwick, Joyce Pence, Howie Fennimore, Gray Henderson, Deb Gift, Tim Gift, not shown Cindy Hayes*



## BCGA Meeting Minutes - May 6, 2015

**Members Present:** Patti Pietron, Deb Steffen, Gray Henderson, Penny Barton, Bonnie Pick, Gail Swan, Barb Pressler, Penny Goodman, Marjory Clements, Howie Fennimore, Ann Warwick, Butterfly Burke, Cindy Hays, Janae Dale

At 9:00am May 6, 2015 President Gray Henderson brought the meeting to order.

**April Meeting Minutes:** Motion made to approve by Gray Henderson, seconded by Penny Goodman, motion passed. Gail Swan noted that the March minutes were labeled as February and a correction should be made.

**Treasures Report:** Rob Lilley was not present. Gray Henderson reported that Rob Lilley stepped down as treasurer. Gray said the board was to appoint a new treasurer. Penny Barton had volunteered to take the position of treasurer for the rest of Rob's term. Penny is in the process of balancing the books. She is already on the checking account. Motion to accept Penny Barton as new treasurer was made by Bonnie Pick and seconded by Butterfly Burke. All approved.

**Home Horticulture:** Gail Swan said the Orchards class had 13 or 14 attendees. The last class of the spring is tonight. Gail said this spring had very poor attendance for Home Horticulture classes. Gail suggested that since typically the fall classes are the worst for attendance, we think about not doing the fall classes at all. The issue of walk-ins came up as it's hard to plan for materials and space when we don't know exactly how many students will show up. It was suggested we use the BCGA office as the venue since it's no cost to us. However if we have more students than our office can hold, we have to turn people away. It was also noted that there are several free classes offered in our community and we charge for ours. Marge Clements suggested a discount for those paying for the entire series at once. Janae will send out a two surveys, one to members regarding member participation and one to past attendees to see what they like about the classes, improvements, and suggestions for classes. Gray Henderson asked the board if we are actually providing a service to the community with these classes.

**Home and Garden Show:** Ann Warwick said due to inclement weather we were only to do one demonstration indoors (instead of outdoors.) Gray Henderson questioned whether this show is worthwhile as it takes up member time and we make no profit from it. It was noted that the show does get exposure for BCGA. The board will discuss the future of this event at a later date.

**Spring Fund Raiser:** Penny Goodman says she has volunteers until noon and she will email her volunteer list to cover from noon on. She contacted the mall manager who says we can use the indoor space at no charge if the weather is bad. Marge Clements made 6 signs for the event. Bonnie Pick volunteered to call the radio station regarding an ad and will report the outcome to Penny or Marge.

**Farmers Market:** Sandra Gevurtz is chairman. No report. Gray Henderson and Vicki Johnson manned the booth and Gray said the location of the booth was very poor. Bonnie Pick said that she sees lots of new people to the area and they have no idea how to grow things in Northern Idaho. She suggested we really get the word out to these new arrivals. Barbara Pressler suggested we make large signs for the Farmers Market booth that have questions on them. For example, "New to Idaho?" or "Need to do some pruning?" Barbara also said she gets deep discounts on plants and suggested we could sell a "plant of the month" at the booth. We could then make a profit on

the sales. However it was brought up that we would have to pay a fee to sell at the Farmers Market.

**Garden Tour:** Penny Barton says we have two gardens and need four more. She will be stepping down as chairperson for this event. Janae Dale suggested the duties be divided up between members. Penny will remain in a consulting position. Deb Steffen, Patti Pietron and Penny Goodman will search out gardens for the tour. The other duties will be divided up between other members.

**Yard and Plant Sale:** Janae Dale is chairman. Janae will do more work on this event as it gets closer. She says items are slowly coming in.

**School Garden Program:** Janae Dale says the gardens are doing quite well. She wants to get a cottonwood tree removed from Kootenai and needs a professional arborist. Gray Henderson has been checking soils at Washington and Northside schools. He says the PH is high at both and has added sulphur. May 10-12 the Elks will install beds at Farmin Stidwell.

**Potlucks:** Deborah Steffen said currently no interest has been shown regarding hosting a potluck. She and husband will host one in June, the date still to come.

**Advanced Education Program:** Mikey Haven was not present. Gray Henderson reported that Mikey did say that the classes were very well attended. She is wondering if we should do more classes. Janae Dale suggested that field trips would be a good idea. Gray Henderson asked for field trip suggestions and that he would forward these to Mikey. Barbara Pressler said she would organize an Orchid field trip.

**Fair:** Cindy Hays is chairman. Cindy is gearing up and will email the planning group regarding a date they can meet.

**Healing Garden:** No report. Gail Blasingame is the new chairman. Gail has asked for help this week.

**Sip and Shop:** Cindy Hayes is chairman. Cindy says the basket for the raffle is coming together. She will sell tickets to the Home Hort class tonight. It was also suggested we sell tickets at the upcoming Spring Fund Raiser.

**Road Cleanup:** Cindy Hayes has chosen the area near the Elmira store as our designated clean up zone. May 18 is the date. The cleanup will take two

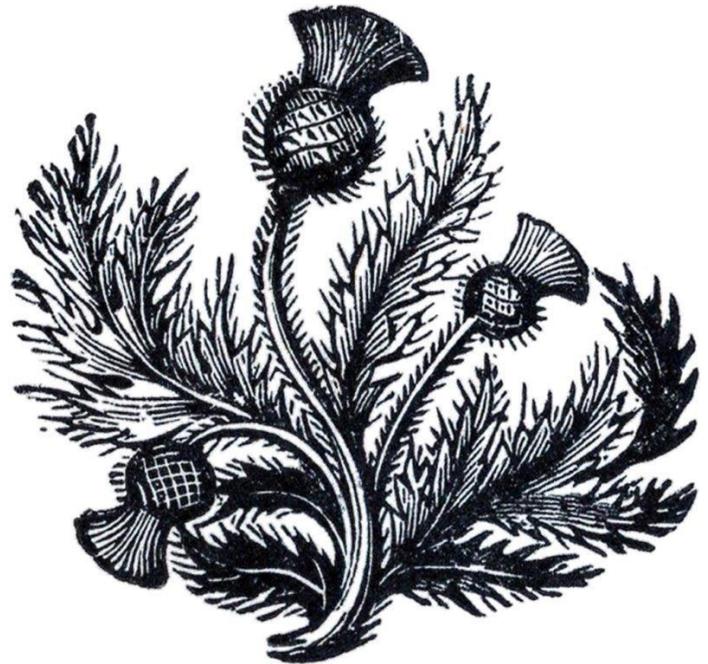
hours. Cindy says total commitment will be about four hours including travel time and possible lunch or ice cream treat time. The group will meet at 8:30 at the mall to carpool. She will send Gray the details. Our highway sign will read "Bonner County Gardeners."

**Mickinnick Trail:** No report. Gray Henderson has not heard from Jan Griffiths.

**New Business:** Jenna Bertus wants to go through the BCGA library and remove the ones we don't use and donate them.

**Office Use:** Gray Henderson received a request from the Bridge Club to use the space on May 8 from 12:00-4:00. Their request was approved.

Meeting adjourned at 10:45.



*"The robin is called the harbinger of spring because he makes so much noise"*

Will Cuppy, writer