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## Is it Time to Change Your Oil?

Before I started working at ARBICO-Organics I'd never even heard of spraying oils on my plants to control insects. Now with a little research and experience under my belt, I can see that horticultural oils are a key part of any Integrated Pest Management (IPM) program. I've been missing out all these years and I didn't even know it!

It used to be that heavy oil sprays could only be used when the plant was dormant because the foliage would be damaged. But now with lightweight oils available, plants can be sprayed any season. The winter is a great time to spray because the insect eggs, larvae inside the bark, and overwintering adults can be easily sprayed when the leaves have dropped from the plant. Horticultural oils work by smothering and suffocating pest insects



and their eggs.

Here at ARBICO-Organics, we have two different oils for you to choose from:

With the season's changing, it is now (or soon will be) the time to apply our **All Seasons Horticultural & Dormant Spray Oil** for insect control. What's great about the All Seasons spray is that the plant doesn't have to be dormant, like so many of the other sprays currently on the market. If your plant is leaf free, give the

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## Our Favorite Product



I just wanted to share with everyone how we use one of the great products that ARBICO sells, **Bioform 4-2-4**, in the 8 oz liquid.

It started several years ago when I realized that I had an allergy to lettuce and had to stop eating salads. I still wanted all those other good veggies you put in, and didn't know what to do. My husband had always wanted to learn to grow sprouts and read how healthy so many of the germinated seeds are. He decided to get a mixture and try it out. After a few false starts, he settled on a mixture of alfalfa, clover, radish, mung beans, lentils, fenugreek, and a bit of broccoli.

At the time we were living in southern Mexico in a climate that was ideal for growing sprouts. We used purified water, of course, and they grew like crazy. Some of the seed came from the States; some was local.

The problem started when we came back to Arizona! We soon decided that tap water didn't work well, so we went back to purified water. However, the seeds - bought in the US - in our Arizona climate - just didn't seem to sprout as well. I was working at ARBICO, and we knew that Bioform had already saved some of our potted plants and trees; it claimed to be good for germination problems; so hey, we tried it.

It was amazing! We had a much greater germination rate by just

putting in a few drops of Bioform in the first soak. Of course, we do not dry the seeds afterwards; we just keep on rinsing them until they are the right size for eating.

Since starting to use Bioform, our sprouts are better than ever. We make them by the quart; it takes 4 days to get a batch fully grown. And now I have a salad almost every day at ARBICO - The sprouts take the place of the lettuce. The blend we use gives a different taste in almost every bite. I add all the other good things... tomato, avocado, pepper, carrots, etc, etc. It's crunchy and full of vitamins and protein! Thanks, Bioform!

*-Catharine*

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plant a good spraying to thoroughly coat all stems and branches. If your plant is still actively producing leaves, it will still work, but will require more spraying (don't forget the undersides of the leaves!). Make sure to spray in spring and fall to get overwintering bugs (excellent on scale, aphids, whitefly, mealybugs, and others).

Another great option is **JMS Organic Stylet Oil**, which is white mineral oil that will help control pests, fungi, and viruses. This can be applied year-round and will work wonders on eliminating mites, whitefly, leafminers, and much more! It is generally safe for beneficial insects, but will suffocate pests or modify insect feeding or egg laying behavior. Powdery mildew will also be killed on contact. This food grade product is odorless, colorless,

and tasteless. **JMS Stylet Oil** must be applied with a 400 psi sprayer.

Now, which one is right for you? If you are just treating a few plants or small garden for insects, the **All Seasons Horticultural and Dormant Spray Oil** will do the job perfectly. If you are growing an organic garden, have a large area to treat, or problems with powdery mildew, then the **JMS Stylet Oil** is the one for you. Preferable, neither should be sprayed when plants are in flower. It won't be the end of the plant if you need to spray, but it can cause problems with pollination or the petals to drop off prematurely.

Now that we all know a little more about using horticultural oils for pest control, we have another natural way to treat pests in the garden. Your plants will thank you!

-Diane

### Bioform 4-2-4

This organic fertilizer is ideal for leaf feeding. It may be sprayed on the foliage of flowering plants, vegetable plants, shrubs, or trees every 2 or 3 weeks or as needed. Spray during coolest part of day, preferably 24 hours before rainfall or irrigation.

1310502 - \$7.30 (0.75 lbs.)



### All Seasons Horticultural & Dormant Spray Oil



This oil-based product may be used as a growing season spray, dormant spray (no leaves) or delayed dormant (green tip) spray to control overwintering eggs

and other insects. Highly recommended for use on fruit trees, shade trees, shrubs, ornamentals, roses and vegetables.

1274101 - \$7.90 (1.25 lbs.)

### JMS Organic Stylet Oil

Use as a fungicide for powdery mildew, as an insecticide and for virus control!

1274107 - \$22.50 (10 lbs.)



### Yellow Sticky Traps



This yellow sticky trap catches whitefly as well as aphids, thrips, leafhoppers, and moths. Use in the greenhouse or outside. Place one trap per 25-50 sq. ft. One/ acre for monitoring purposes.

1254001 - \$3.95 (0.5 lbs.)

### Bon-Neem Insecticidal Soap

Bon-Neem Insecticidal Soap Ready-to-Use kills a wide variety of insect pests on contact – gone are aphids, mites, mealybugs, scale, thrips, whitefly, caterpillars, leafhoppers and many others.

1246601 - \$12.85 (3 lbs.)



## Bug of the Month – *Eretmocerus eremicus*



Got Whitefly? It sounds entertaining just like those milk commercials but sadly it isn't. Fall is the time for whitefly to start to affect your indoor plants. Whitefly typically feed on the undersides of plant leaves. While the feeding damage alone can cause tragic losses, it is the ability of whitefly to transmit or spread viruses that has had the widest impact on global crop production. There is nothing more disheartening

that having your whole indoor crop devastated by something so small. The question is "What do we do?" ...The USDA recommends "an integrated program that focuses on prevention and relies on cultural and biological control methods when possible." What is that you say? No worries, we have the answer for you: *Eretmocerus eremicus*.

*Eretmocerus eremicus* is a tiny parasitic wasp (~1 mm in length) and is an important parasitoid of whitefly. *E. eremicus* attacks many varieties of whitefly including greenhouse whitefly (*Trialeurodes vaporariorum*), sweetpotato whitefly (*Bemisia tabaci*), silverleaf whitefly (*B. argentifolii*), and bandedwinged whitefly (*T. abutilonea*). Optimum temperatures that are best for rapid development and egg production occur at 77-84°F. In the greenhouse environment, the temperature should be controlled to ensure that *E. eremicus* will develop more quickly than its host.

*E. eremicus* is assumed to be susceptible to pesticide residues and fumigants. Releases of *E. eremicus* will be most effective in crops that have not been sprayed for 10 -14 days. Avoiding the use of insecticides that kill natural enemies is a very important aspect of whitefly management. Control of dust and ants, which protect whiteflies from their natural enemies, can also be important, especially in citrus or other trees.

*E. eremicus* can be integrated into an organized program of monitoring with **yellow sticky traps**, and preventative environmental control. This environmental control includes a great fertility program (a healthy plant is a safe plant), exclusion practices (make sure they can't get in), and sanitation (make sure new additions are pest free). Also it sometimes is necessary to knock down the numbers if the infestation is too large with the use of an **insecticidal soap** or **neem oil product** to allow the beneficials to have a better chance of gaining that edge. Don't let whitefly ruin your hard work and nature's hard work too!

-Jerry

## Everything Needs Comfort Food...



It's getting chilly out and easy to justify taking a break from your gardening chores. Nothing is going to grow in these cool temperatures, right? But if you venture out early next spring, you'll notice that you are overrun by crabgrass. What happened? We forget (especially if we've just relocated from some northern state to a southern state) that weeds love to grow in cooler, moist climates. They prefer 50° F and really take off at around 60° F. Late fall or winter fertilization is the very best way to maintain healthy, weed-free gardens, lawns and pastures.

Everyone agrees that you need to fertilize at planting, again at bloom and another foliar feed in late summer. However, there are many benefits to a fertilization program that includes a fourth application. This late application will help the soil and vegetation recover from the summer stresses caused by heat, diseases and pests, and it will boost the rooting of new plants in the spring. Understanding the climate in your area, the needs of your soil, and the needs of the plants you grow are all important factors in helping you decide what soil amendments to use and when to apply them. Before fertilizing, do a Soil Analysis to determine the nutrients that your soil is lacking. A pH test will provide lime or sulfur requirements.

Some novice gardeners think applying fertilizers to an empty garden seems silly. However, most gardens just went through a productive season that literally sucked the life out of the soil. Usually gardens grow plants that are not "natural" to the area, draining the soil of its nutrients, and then these plants are removed (harvested) before they can

naturally recycle those necessary nutrients back into the ground. The smart gardener will begin to restore nutritional balance now to be able to successfully garden in the spring. Don't neglect your seasonal vegetable and flower gardens, as they need a regular supply of nutrients to promote their continued growth and sustainability through the harsh winter months. Cool season veggies (i.e. lettuce, broccoli, spinach, etc.) need Nitrogen. Cool season flower beds need Phosphorus every six weeks. **Bioform 5-3-4** is one of my favorites for both veggies and flowers, as it has Sulfur and Calcium too!

There are many additional factors when deciding between a liquid fertilizer and a solid fertilizer. You need to consider vegetation, climate, solubility of nutrients, particle size, soil type, equipment and application processes. It can become very complicated. Generally, the benefits of a liquid or water soluble fertilizer are a more rapid greening, easier application and a low cost per application. The benefits of a solid fertilizer are a slower and regulated release of its nutrients with long lasting results; even fewer applications, making the solid fertilizer even more economical; a lower burn potential; and an overall consistent response from your grasses to the nutrients, which in the long run will provide a better balance. For southern states especially, I would recommend solid fertilizers. **McGeary Organics 5-3-4** is a great slow release balanced fertilizer for year round use. McGeary products have formulas for lawn, garden, fruit trees and more, and they are all OMRI listed and NOP compliant.

Aeration and de-thatching are the very best way to begin fall fertilization and improve your lawn/pasture's health. Aerating and de-thatching are both excellent ways to open the soil surface for better nutrient and water movement. They will also help expose overwintering pests to the elements and help your soil nutrients move into the root base of the grasses. Check out our Thatch Away, which is an all-organic

## Garden Defense Multi-Purpose Spray

This easy to use formulation of Neem Oil is perfect to have on hand to take care of a wide variety of garden issues. It works as a fungicide, insecticide and miticide on roses, flowers, houseplants, ornamental shrubs, fruits, nuts, and vegetables in and around the home and garden.



1555612 - \$7.85 (3 lbs.)

## Bioform 5-3-4



Bioform Dry is our dry version of the popular liquid Bioform 4-2-4. This powerful organic fertilizer is one of our favorites for use on vegetables,

shrubs, and flowers both at install and throughout the growing season.

1310501 - \$6.95 (6 lbs.)

## McGeary Organics 5-3-4



McGeary's premium quality general use fertilizer is ideal for corn crops or lawns, as well as vegetables and fruits, ornamental trees and shrubs, and flowering annuals or perennials.

1200917 - \$7.95 (5 lbs.)

1200918 - \$9.95 (8 lbs.)

## AgGrand 4-3-3



Aggrand Natural Organic Fertilizer provides plant nutrients — Nitrogen, Phosphorus and Potassium (NPK) which promotes vigorous growth.

1440001 - \$12.70 (2.5 lbs.)

## Good Bug Power Blend



ARBICO's Good Bug Power Blend™ is a combination of yellow, red, crimson, rose, and white clovers, grizzly alfalfa, white alyssum, nasturtium, white yarrow, carrot, dill, daikon, and celery seeds.

1134001 - \$6.25 (1.5 lbs.)

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solution to thatch build-up. With Thatch Away you do not have to rent expensive de-thatching machines. It's a concentrated microbial formula that breaks down thatch and converts it into valuable organic matter and nutrients. Thatch Away can also help prevent thatch build-up from reoccurring. It will improve the overall biological activity in the soil and compliment any fertility program you choose.

Most late fall fertilization programs for lawns and grass pastures include moderate amounts of nitrogen, phosphorus and potassium. You want a nice balance across the NPK. There is no benefit to applying excess amounts of nutrients at this time of year, and yet it is so important to give your soil and vegetation a little boost. Any organic fertilizer will naturally be a slow release. An excellent choice would be our **AgGrand 4-3-3**. It is formulated from kelp and fish, potent macro and micro nutrient sources. To avoid potential leaching and run off problems, you must use slow release nitrogen in sandy soils. If you choose to use quick release nitrogen, don't wait until very late in the season to apply it. Keep in mind a late season nitrogen spike will encourage weed growth rather than suppress it, especially with crab grass.

Timing is everything with grasses. If you fertilize too soon in the fall (while the grasses are still actively growing) you are at risk of promoting winter injury and disease. You must wait until late fall is here. In addition, you don't ever want to apply fertilizers to frozen



soils. Again, timing is everything!

Fertilizer can be the most expensive component associated with establishing pastures. Again, the approach to your fertility program is dependent upon whether or not your pasture has grasses, legumes, or a combination of both. Using legumes or a combination of grasses and legumes can be very beneficial. Legumes (i.e. alfalfa, red clover, white clover, soy, etc.) provide grazing animals with added protein and have been shown to reduce weevil and leafhopper populations. The great thing about legumes is that they fix their own nitrogen, so fertilizing with nitrogen is not necessary. Legumes form a beneficial relationship with rhizoid bacteria to get atmospheric nitrogen. Legumes also have long tap roots that obtain water and nutrients from deeper in the soil. They thrive on Phosphorus and Potassium, so soil fertility can usually be maintained with mineral-bearing rock powders like Greensand combined with animal manures, compost and other natural fertilizers. Check out our **McGeary Organics 0-2-9**, specially formulated for legumes. It has the Phosphorus and Potassium plus other important trace minerals that legumes love.

Legumes provide excellent cover crops. Cover crops are an important means of supplying organic green manure, an important part of a fertility program for a certified grower. They improve soil structure and replenish soil nutrients. Cover crops can be planted almost any time during the year, provided the climatic conditions are good for the variety of legumes selected. Perennial cover crops become permanent covers in orchards, vineyards, etc., where they also provide a habitat for beneficial insects. Consider our specialized **Good Bug Blend**; besides containing alfalfa and clovers, it also has dill and lettuce to attract bees. Please call for large quantity price quotes.

Most experts agree, regardless of the vegetation or climate, that slow release of the nutrients in your late fall or winter fertilization will optimize the healthy balance in your soil. That is why natural or organic fertilizers are always the best choice for your winter fertilization, whether you are a commercial organic grower or just concerned about having a green lawn or productive garden in the spring.

*-Mary Anne*

**THE THANKSGIVING  
WEEKEND  
SALE!**

\$1 \$2 \$5

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**1-2-5 SALE!**

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perfectly timed for  
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PO Box 8910  
Tucson, AZ 85738-0910  
1-800-827-2847  
email: [info@arbico.com](mailto:info@arbico.com)  
[www.arbico-organics.com](http://www.arbico-organics.com)

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