

The Traveling Beekeeper



The Power of One Cup of Clover Seed

by LARRY CONNOR
Wicwas Press

1620 Miller Road, Kalamazoo, MI 49001
LJConnor@aol.com

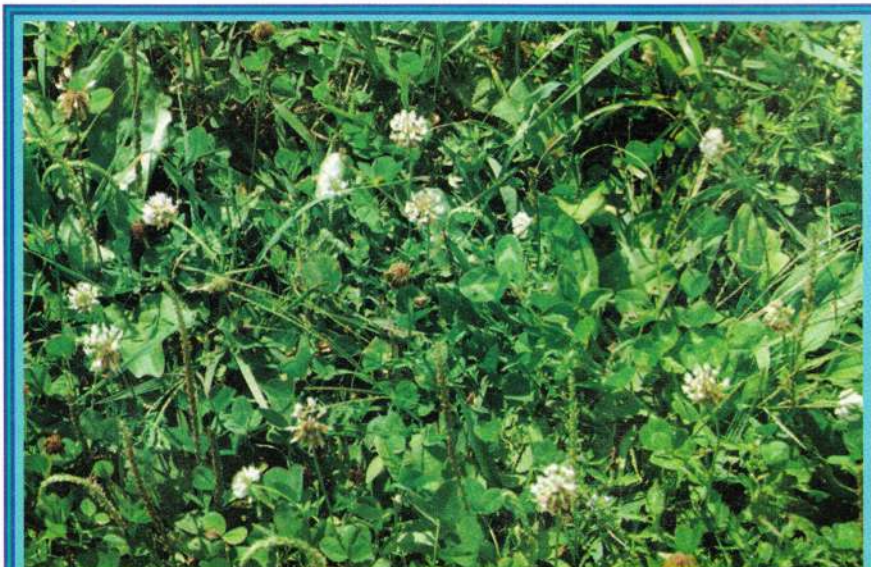
In August my brother Mike picked up some white Dutch clover seed from a supplier near his home near Wayland and I spread about a cup of it in a few places on my city lot. With his help as a professional landscaper-arborist we have eliminated most of the grass from the back yard and have replaced it with 3.5 tons of bluestone (a type of limestone) and a lot of flowering plants. My goals were twofold. First, I wanted an outdoor “room” to sit in when I am at home—and a place that the birds could visit when I am traveling (and I can watch them while washing dishes). Second, I wanted to eliminate most

of the grass.

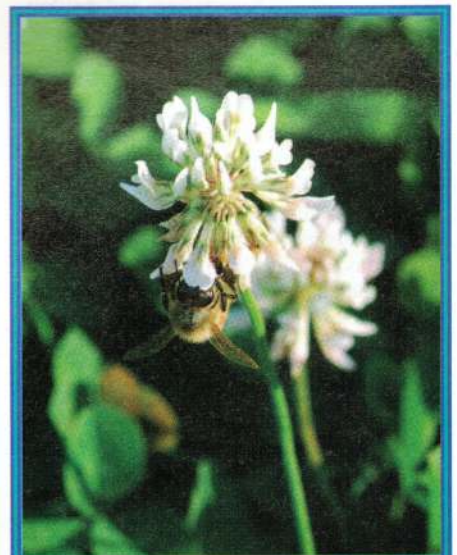
We have done a fine job of both, and while the plan seems to be overtaken by hollyhocks, they pull out easily when small (and I have been giving away dozens of the plants at beekeeper meetings). Some of the plants are huge, as they are just in the first year of their biennial cycle and have not flowered yet. The parent plants are very popular with a huge array of bees, including honey bees. There are bumble bees, a number of very rapid flying leaf-cutter bees, and one large bee that I identified as *Melissodes bimaculata* that is all black except for two bands of white on the tip of its abdomen. This species

nests in the ground. I have not seen this species on any other flowers, but they are large and very impressive with their hairy black bodies covered with the pale yellow pollen of the hollyhock.

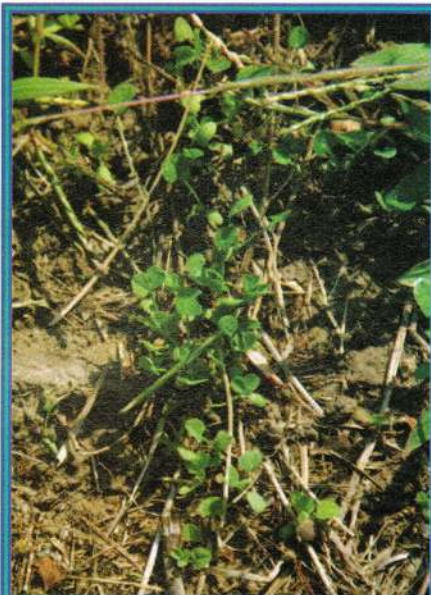
As I reported last month on the Great Sunflower Project, there are plenty of flowering plants we can have in our yards that a wide



This is a close-up of an area behind the barn and pole barn at the farm. The volunteer white Dutch clover is doing quite well with the grass plants and a wide range of weeds. The spot gets mowed as little as possible—just to keep the various trees from starting to grow.



Worker honey bee with her head in a floret of the flower head of white Dutch clover. This clover grows along stolons in the ground. Alsike clover branches above the ground and is usually much taller and not suitable for lawn use. When soil moisture and temperature allow, white clover blooms from spring to late fall in many areas.

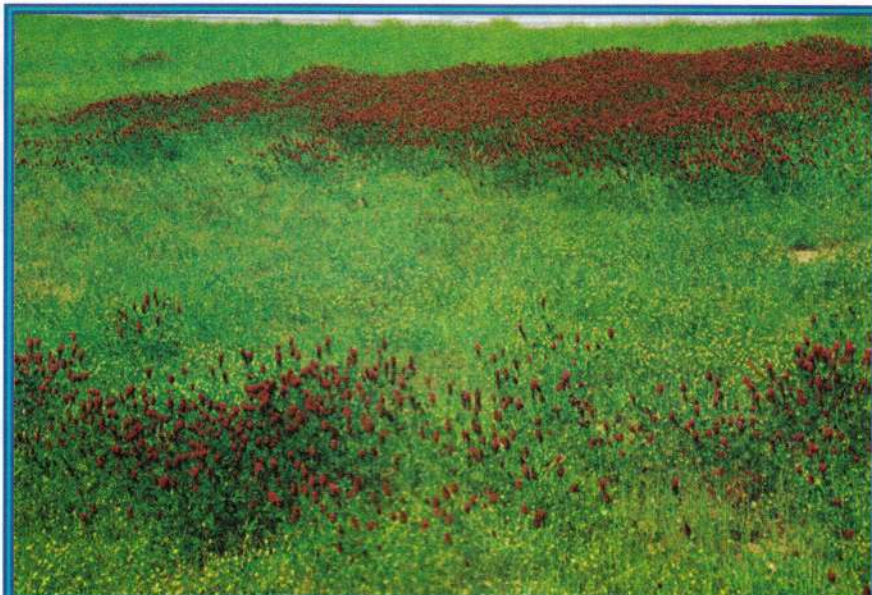


White Dutch clover seedling growing in a bare spot in my lawn. I over-seeded the lawn around Labor Day, and some had germinated within a week. This picture was taken on Solstice. There was white clover in the lawn when I moved in; I am just adding to it!

range of bees will benefit from and that can be watched from the safety of the lawnmower. The hollyhock is one such plant. But back to the clover seed.

White clover (*Trifolium repens*) is called many things in many areas, including white Dutch clover, white clover, and Ladino clover (less often Shamrock or Irish clover). This is basically one clover species that has been developed into strains for different applications. Ladino clover was developed from white clover by forage breeders to use in animal grazing. The addition of this clover to grasslands increases the growth of cattle enough to make the effort pay back. While fine for pastures and large fields, do not use the Ladino clover in lawns since it is too tall for an effective lawn. It is popular in grass mixtures for animal grazing because the clover adds protein to the animal diet. The plant also “fixes” and adds nitrogen to the soil, so it is a win-win plant for farmer or rancher.

Clover plants have deeper roots than do grass plants. That means that the plants will stay greener when the grass is drying up. I suspect this is when they are most attractive to honey bees because when the clover plants are slightly stressed, and plants offer greater nectar rewards in terms of sugar concentration. There are days I don't see a single bee on white clover, but at other times I find them working actively until dark. I like it when honey bees work until dark, since it means they are maximizing their forager population and the beekeeper's investment!



Crimson clover in Tennessee in April. Also clonal in nature, it is an attractive spring clover. It will not persist like white Dutch clover with bloom throughout the season.

Most of us have patches of white clover in our lawn that have developed from a single seed that has grown and developed with its clonal nature. There are people who do not like these patches of clover in the lawn. For that reason it is better to overseed the clover or to include the clover with the grass seed when putting in the lawn. Exclusively all-clover lawns do not last very long—a few years only—but a clover-grass mixture will become established and last a long time because there is a relationship between the two plants that is beneficiary. If the density of the clover drops, overseed the clover seed every few years to keep up the clover component.

There was a time decades ago when grass seed mixtures for lawns routinely included clover seeds. The clover kept the grass greener longer and kept the resident rabbit population well fed. While I have not checked all the garden centers, I find that most lawn mixes are just grass species—clover seed, if present, is a contaminate. It may take some effort to find a local source of white clover seed, although I found several selling it for around \$4 a pound at web-sites. Make sure you buy the white clover or white Dutch clover. Do not purchase Ladino, red, alsike or sweet clover, as these are pasture clovers and will not work well in a lawn.

Beekeeper Outreach: One Cup of Clover Seed!

It seems to me that all beekeepers should be giving out bags of clover seed one cup at a time to our neighbors and friends; maybe a few favorite relatives too. Clover seed can be spread in the late winter when the ground is still frozen, allowing the seed to fall into the frost cracks. Or, as I did in late August (mid-Aug to mid-Sept seems ideal in Michigan), spreading the clover seed in the dry grass and soil (which may also be

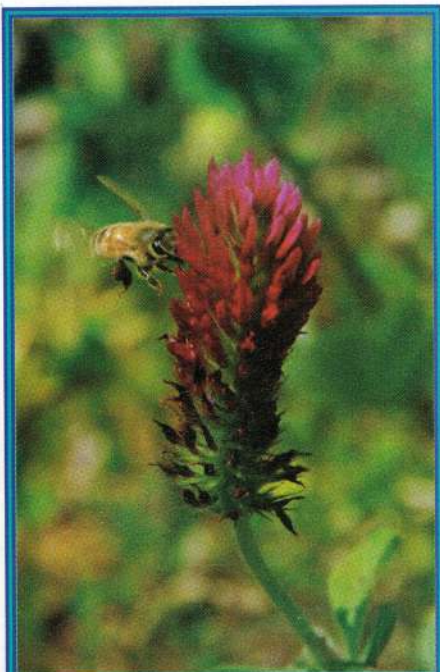
cracked!). A light raking may help, but was not necessary in my case. This gives the plants time to germinate and grow with the spring or fall rains. In my case I found the seed had germinated in about a week and even where I threw seed on established grass (dormant from the summer drought), the seedlings are present and should continue their development this fall and early next spring. We had nearly 12 inches of rain in three days in September from the remains of a Pacific hurricane and Ike, and most of the small clover seedlings survived the pounding rains. There was some seedling loss several days later due to damp-off or root rot.

Once established, each white clover plants will spread by horizontal stems called stolons. There are roots at the nodes where the stem grows upwards to form the plant. By overseeding your lawn with seed, or mixing clover seed with the grass seed, the clover plants will grow together and mix well with the grass plants.

Small quantities of the seed sell for about \$4 per pound, so \$20 will buy five pounds of seed. Divide this up into ten packages and give this to ten neighbors around your bee locations. Offer to spread the seed yourself. You may want to stay away from the kiddies' play area, but those places where nobody walks (just ride over with the mower), spread the seed and wait.

Think about it. If a thousand beekeepers purchased this five pounds of clover seed and gave it to 10,000 neighbors, in time we could actually impact the amount of bee-friendly forage. It answers your neighbor's questions about “What can I do to help the honey bee?” This is a specific and proactive approach to a very well-intended request.

Of course, we would all like to see farmers plant 600 or 6,000 acres of sweet clover near



Forager honey bee approaching crimson clover flower head.

our bees, and let the bees go wild on those delicious flowers. But, the chances of that happening are pretty limited; we would be lucky if one in 100,000 of us could find such a grower.

White Dutch clover responds well to mowing, coming back after a trim and continuing to bloom. A minimum amount of water during a dearth will keep it lush and flowering, so a system of using building runoff would be of benefit to this plant. While clover plants can become invasive, I say let 'em spread. If the clover spreads into my roses, I will have one less place to weed!

The all-clover lawn is not a new idea. It has been suppressed by an army of turf specialists and fertilizer/herbicide companies that want to kill the clover rather than promote it. But more and more folks are interested in avoiding those fertilizer and herbicide programs due to their expense, risk to health and the environment, and the cost of fuel to mow the highly fertilized grass plants. Then, there is the disposal problem for grass clippings. I am not a fan of grass lawns and see them as a huge waste of valuable resources. We need to convert the population's attitudes so that plants beneficial to bees are grown where nothing but grass grows now.

Recognizing a market, some garden centers are going more organic because customers are asking for it. Contact your closest center and see if they can promote clover and other bee-benefiting seed in these outlets.

Changing over to a clover lawn will mean that the herbicides cannot be used on them or the clover plants will be killed. Likewise, a heavy nitrogen fertilizer (used to get that rapid green by the lawn treatment companies) is not compatible with a clover lawn.

There are a number of useful sites on the

Internet to read more about clover lawns. I liked, and have shared information from one I found in eastern Canada <http://versicolor.ca/lawns/docs/clover.html>. One useful tip from this site is how to spread very small seeds to avoid overseeding (which I did when I went out with my cup of seed. Add sawdust or vermiculite to the seed so the bulk is increased, and the spread is more uniform. The actual density of clover seed does not need to be that high, perhaps one seed for every four inches or so. Adding a "filler" will really help you get the seed down more uniformly.

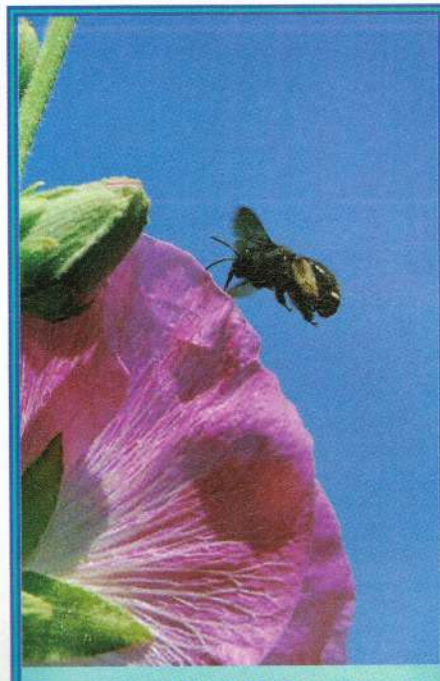
By inference, I gather that some of the work from this site developed out of a need for insect control in lawns. To reduce lawn insecticide use, replace diseased and insect-killed patches of lawn with grass-clover seed, and allow the clover plants to spread where chinch bugs, grubs and grass diseases are a problem. A year ago I shared with you the photo of white clover on Roosevelt Island in New York City, where there was a chemical free lawn surrounded public buildings. There seems to me to be a great change or shift in American citizens' attitudes. More and more understand the role of bees and a diversity of plants in our world.

What Else Works?

White clover is used throughout the country, but of course, it is not a dry land plant, so it is not going to do well there unless watered. This may be part of your personal lawn plan, but I like to see native plants used when possible in these areas. In the southeastern part of the country I would look at Crimson clover as an alternative for lawns, although my perception is that it grows taller than most of us want for lawn work. I rather like the bright red flowers in the spring. Since this clover is also clonal, you could easily have patches of the plants in your lawn and mow around them while they are still blooming.

Another plant successful in the northern states is birdsfoot trefoil. This yellow-flowered legume responds well to mowing and will continue to grow in lawns after the grass dries up. I think this is a suitable plant for lawns for churches, playgrounds and business campuses where the land is not watered. I strongly suggest this or white Dutch clover for the big box stores where they may have a sprinkler system, but cannot afford to use it because of the cost of water. Nobody walks on the grass anyway, except the person who mows it! A mixture of clover and trefoil might be attractive and each plant may find its niche in the lawn's various microclimates. Certainly repeated overseeding would be beneficial, and cost effective when comparing the cost of clover seed to that of water, fertilizer, herbicides and fossil fuel needed to keep up a "perfect" lawn. Since all these clovers attract a wide range of pollinating insects, we can recruit the non-honey bee advocates to make this conversion, too.

All these lawns will work best if the



Ground nesting *Melissoides bimaculata* on hollyhock flowers.

mower is set as high as possible to keep the clover and grass plants healthy and growing.

If there is an alternative to a lawn, consider installing a prairie in your yard if local ordinances allow it (I face a 12 inch rule for my front lawn since city domos don't know weeds from wildflowers). At the Pfizer Animal Veterinary Health farm in Richland (where I went to high school and when it was the Upjohn Farm) there is an intentionally planted prairie that a lucky few inside the office building can see from their office windows, and the minions can see from the drive way. The public can see it from the road, but it is fenced in, since this is a research facility and security is pretty obvious. The plant mix the Pfizer people used includes a large number of composites, but there are legumes, lupines and a bunch of other native plants growing rather well. This fall the goldenrods and asters are putting on a show. There is a huge amount of prairie restoration information available on the Internet if you are interested.

My point is that people want this, and they want it now. Many folks look at large corporate lawns and think of the waste of land, resources, fossil fuels and labor. Cost savings may actually be a factor, once the prairie is established.

Dr. Connor is off to France this month to meet with bee breeders, but will be back for the Southern New England Beekeepers Assembly November 22 in Hamden, Connecticut. Check out www.sneba.com. He also plans to attend the National meetings in Fresno and Reno in January. For his latest book, a reprint of G.M. Doolittle's Scientific Queen Rearing, check the Wicwas Press website www.wicwas.com.