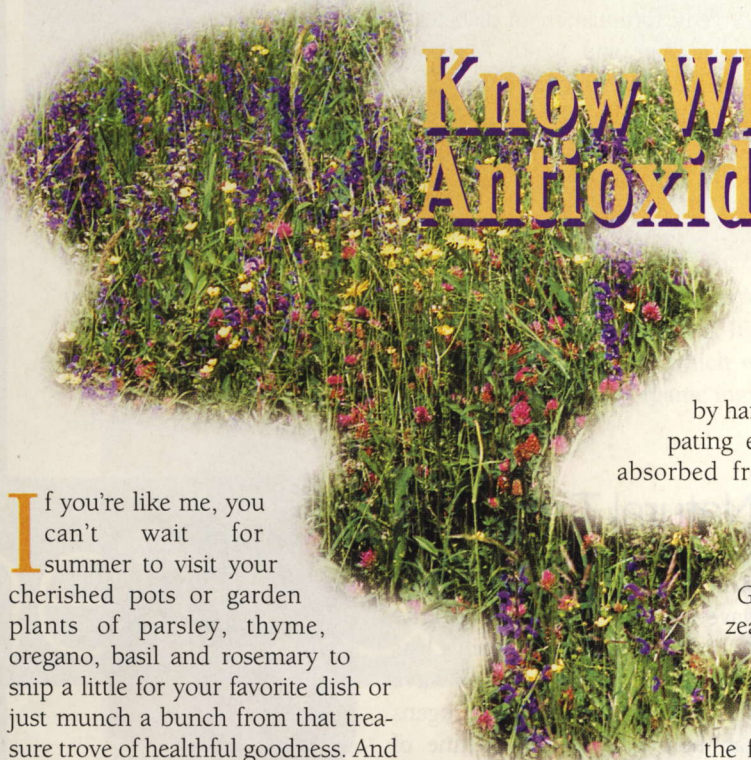


Know When to Harvest Antioxidant-Rich Herbs

by Gina Mohammed, PhD



If you're like me, you can't wait for summer to visit your cherished pots or garden plants of parsley, thyme, oregano, basil and rosemary to snip a little for your favorite dish or just munch a bunch from that treasure trove of healthful goodness. And then, over to the emerging veggie patch: antioxidant-rich broccoli, cabbage, sprouts, peas and beans to tempt any free radical.

But wait! Before you snip or pick, consult your watch. If you really want your best dose of antioxidants, you'd best wait until about noon, and preferably harvest on a sunny day. Why? Because that's when plants contain their highest concentrations of antioxidants and other protective phytochemicals.

These days, we're all up to speed on the benefits of antioxidants to humans. They keep us healthier by cleansing our bodies of overactive, toxic radicals that could otherwise wreak havoc with everything from our eyesight to our skin. Not to mention possibly protect us from cancer and cardiac problems. Antioxidants are scavengers for the chemical vandals that would otherwise ravage our tissues. They can also prevent the formation of toxic molecules in the first place

by harmlessly dissipating excessive rays absorbed from the sun.

Their names are well known.

Glutathione, zeaxanthin, the

A C E

vitamin gang, and

the flavonoids are

members of this elite molecular SWAT team.

Looking Out for Number One

So what's this business about time of day and sunshine? Well, one needs to realize that these good substances are produced for their protective benefits to the plant. That broccoli spear is aiming to look after *itself*—not us—when it pumps itself full of protective chemicals like glutathione. And, because plants are made in a marvelous way so that they don't waste their energies, the plant has a lot of the goods when it needs it most. That is, when it's likely to encounter stress.

When the sun is hot and bright, or even when a cold snap has just hit, or when a bug has just bitten—the plant needs protection and that's when you're

likely to find the highest concentrations of antioxidant.

For instance, a number of research studies have tracked the changes in antioxidants over the course of a sunny day. Concentrations are typically low at night and early morning, then higher during the midday hours. On a cloudy day, their levels could be relatively low throughout the day. Very bright sunlight can overload plant metabolism and cause serious molecular damage unless the plant is able to either control absorption of excessive light, or clean up toxic radicals formed by the sun's energy.

This pattern is fairly ubiquitous throughout the plant kingdom—showing up in trees, shrubs and herbs and enabling plants to thrive in many kinds of environments. Food for thought as you plan your daily harvest. Work with your plant's natural cycle to squeeze a little extra goodness for yourself.

A hint—it's probably better to expose your antioxidant-laden plants to just a bit of extra stress during growth. A plant that is lovingly nurtured and never exposed to the normal stresses of life logically doesn't need to make much antioxidant.

So an occasional drying of the soil, a little less fertilizer, a few weeds here and there—these are the stuff of tough, healthy herbs and vegetables—just don't overdo it! ■

Gina Mohammed, PhD, is a plant biologist.