Cut Flowers and Rubber Bands

You've probably come across the notion that cut flowers (e.g. roses) last longer if the stems are re-cut under water. This is indeed true, but why?

The answer depends on understanding how or why water actually moves through a plant. Water in the soil enters the roots, moves into the stems and leaves tissues, and exits as water vapor through pores or "stomates" in the leaf surface.

Air is always drier, or has less moisture, than the fully hydrated tissues inside a plant leaf, unless of course it's raining. Therefore, because the air is drier, water is literally being sucked or pulled out of the plant when the stomates are open; this pull causes water to enter the roots and travel upward through the plant. As a result, the water in the stem of a plant is actually under tension and being stretched like a rubber band.

When you cut a flower stem, the water, under tension, "snaps back" inside the water holding cells in the stem like a rubber band. This release of tension creates an air bubble at the cut end. By re-cutting the stems under water, the air bubble is removed, and the stems can more easily take up the water in the vase. As a result, your fresh cut flowers last longer in the vase! That's how it works.

Therefore, avoid cutting flowers during the warmest part of the day when the water in the plant is being "stretched" the *most*. The best time to cut flowers is when the stomates are closed and the rubber band is stretched the *least* - early morning after the dew has dried or in the evening after the sun has set.

Given your newfound knowledge, I'm sure you will be able to appreciate why cut flowers last longer when they have been consistently watered or at least have been watered well the day before. In addition, the same holds true in your vegetable garden. Herbs, lettuce, greens and other veggies will remain fresh much longer in your refrigerator if watered consistently and/or harvested in early morning or in the evening.