EDUCATION RECAP

Charles Anfield, CGCS, *Heritage Bluffs Public Golf Club*

Medinah Clinic

On an unusually warm and windy fall day, the 56th Midwest Turf Clinic and Annual Meeting were once again held at the beautiful Medinah Country Club, Curtis Tyrell, CGCS, hosting.

This year's theme was "Going Green."

The first speaker of the day was Kay McKeen, President of SCARCE (School and Community Assistance for Recycling and Composting Education). SCARCE is a not-for-profit environmental education organization. Kay's presentation was titled "Are We Doing Enough?" Her goal is to raise awareness of environmental concerns. She spoke of our responsibility of not leaving a"mess" behind for future generations. She has found that by educating people, they do care about the environment and want to become part of the solution.

Kay McKeen started the education with a few enlightening details about the way we live.

One of her key concepts was that of sustainability.

SUSTAINABILITY: Meeting the needs of the present, without compromising the ability to meet the needs of the future.

Her other key concept was that water=energy. Embodied water is the concept of how much fresh water it takes to make a specific product. An example is: a ¼ lb. hamburger takes 1 gallon. Every drop counts. We are fortunate that we are water "rich." The Great Lakes comprise 21% of the world surface fresh water. We have an obligation to use that water wisely.

Some of her other concerns are:

Ocean Floating Garbage Patches Our satellites track these floating garbage islands which are 30 feet thick and hundreds of yards across. Most of the garbage patches are non-degradable plastic which is harmful to the oceans creatures. The garbage is dumped off shore by coastal countries and this stuff just floats around and around and around….

Space Garbage (orbital debris) Anything dumped in space, stays in space until it reenters our atmosphere and comes right back at us as a flaming ball of trash. This space garbage is tracked by NASA. Currently there are over 9000 pieces in the Earth's orbit. They don't want their rockets and space stations bumping into this stuff at 700,000 MPH. Bad things would happen. Dumping garbage in space is incredibly expensive ($20,000 per pound) and not the answer.

NIMBY Syndrome (Not in my backyard) Who wants to live next to a dump? Much of the urban garbage is shipped out- of- state to somewhere nonurban. Although the dump sites are supposed to be totally contained, they all leak either methane gas or liquid that has "bad stuff" in it that may contaminate the aquifers. The further the trash has to be trucked, the more expensive it becomes to dispose of. An Illinois resident makes 8 pounds of garbage per day!

So what is the answer? Everything is connected. We can't continue to do what we are doing, it's not sustainable. Kay offers solutions. To be an environmentalist you must be an activist.

ZERO WASTE is the answer. We need to re-think how we purchase everything. Kay recommends a "cradle to grave" assessment. How is the product made, how is it used and where does it go when we are done with it. Everything needs to be composted, reused, deformualated, demanufactured, and recycled. Sustainable solutions require "re-thinking."

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Other solutions:

- Green landscaping with native plants: drought resistant, pest resistant, prevent erosion
- Install permeable pavers: decrease surface run off, ground water recharge, reduce ice formation
- Rain barrels: collect rain water for plant use
- Water conserving toilets: dual flush mode reduces use, check tank for leaks
- Soil conservation: utilize red wiggler worms to eat food waste and produce topsoil
- Use compostable food containers: made with corn stalks that completely break down
- E-Waste: use drop off sites to reduce hazardous waste in landfills
- Anti -idling Law: No trucks are allowed to idle for more than 10 minutes
- Use CFLs: Compact florescent lights use only 25% of the power of an incandescent bulb
- Use power strip: turn off strip when not in use
- Minimize cell phone charging: it only takes 45 minutes to recharge phone
- Education is the most important part of the environmental puzzle. Be a leader, think GREEN. Provide education for your staff and players.
- Why pay for something twice? Reuse + Recycle = Green Economics
- Kay can be reached at www.S-C-A-R-C-E.org

Jim Moore of the USGA brought his casual and cut to the chase demeanor to the Turf Clinic.

John Walton shared his vast knowledge of fuels and the future with the audience.

James Moore from the USGA was the next speaker. Jim serves as the Director of Construction Education. Prior to this role, Jim worked the Mid-Continent Region of Green Section for 12 years, making over 1000 Turfgrass Advisory Service Visits to courses throughout the ten states of the Mid-Continent region. His topic today was the history of the putting green.

Jim started his presentation off with a story told in his west Texas drawl that made me think of Tommy Lee Jones. The first greens were at St. Andrews in Scotland. They were just grass cut around the holes. As the game grew, more wear was placed on the small greens. The science of green construction was beginning.

The early greens are called "push up" greens. They were anything but. Each green was constructed of very specific components. Some of the materials included: sifted breeze, sharp sand, peat moss, lime, fertilizer, and manure. Each site was different and the ingredients varied.

As green construction evolved the size of the greens became larger. Future changes came with internal drainage and some included underground irrigation.

Some different construction methods included: Beale, C.B. MacDonald, Donald Ross, Purr-wick, California, and eventually the USGA method.

After WWII, play continued to increase and the soil greens were easily compacted. A new construction method was needed.

The USGA came out with their current specifications in 2004. The ideal percolation rate is between 6 and 12 inches per hour. Greens that percolate too fast are prone to leaching nutrients.

A new tool the USGA has been working with is called the Trufirm Testing Device. It is mainly used for USGA Championships, but will eventually be used for other courses. The device measures overall firmness. It drops a hammer device that is attached to a computer feedback system in order to record the data. It measures COR (coefficient of restitution: you are probably familiar with this concept to measure driver faces) and penetration.

Some observations they made:

- Firmness is directly related to soil moisture
- Rolling has a minor effect
- Growth has an effect
- Green speed and firmness may be independent
- The Trufirm Testing Device is also used to test bunker sand firmness. You don't need to worry (for now) about your Green Chairman using this tool, it has a retail price tag of $10,000.

Our last presenter for the day was John Walton, the Vice Chair of Chicago Clean Cities. He is a member of the steering committee of Partners for Clean Air, the State of Illinois Biofuels Investment and Infrastructure work group, and the Biofuels Utilization Subcommittee. John's main job is as the Fleet Manager for the Forest Preserve District of Dupage County.

John claims at this time there is no shortage of oil or gas (the current fuel prices seem to back this). This doesn't mean that there won't be in the future. Continued higher demands by our nation and other developing countries could create a shortage in the future. Oil is a non renewable energy source. The U.S. currently uses 25% of the world's energy; we comprise 5% of the population. Eventually the demand will exceed the supply and we will lose our current lifestyle. We can change voluntarily or we can wait for mandated change.

John offered the following alternative fuel resources:

Ethanol: Also known as E-85, which is 85% alcohol and 15% gasoline. It's made from corn in the good old US of A. It can be made from many other biomaterials including switch grass and woodchips.

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Biodiesel: Refined diesel fuel made typically from soybeans. This fuel is a very good cleaning agent so it may initially cause filter problems after converting from diesel fuel. It can be used in cold weather with additives.

CNG: Compressed natural gas. This is the same fuel you use for cooking at home. It currently is the lowest fuel cost. The infrastructure is very expensive but it is the safest, cleanest fuel we use.

LPG: Liquid propane gas. This is what you use in your outdoor BBQ. This is the second cleanest fuel. The infrastructure is inexpensive.

LNG: Liquid nitrogen gas. Frozen natural gas is converted into a liquid.

Hydrogen: This is the fuel of the future. It can be burned in normal engines. It has the safest emissions of all the fuels — water and oxygen.

Electric: Vehicles are "plugged in" and charged. They will have a limited range. Zero emissions. Low infrastructure fuel cost.

Gaseous Coal: Coal can be made into liquid fuel. The Air Force is currently testing the product in jets. It is an expensive technology.

Vegetable Oil: At this time this is not an EPA tested alternative fuel. It can be used directly in a diesel engine. It is not considered "good" for fleet use. There is a high amount of soot left in the engine.

Those are the current choices for alternative fuels. For further information John can be reached at jwalton@dupageforest.com.

It was another great day of education at the 56th Midwest Turf Clinic. We continue to seek out and explore new ways of meeting the needs of our profession in the future. Great job by the Education Committee! **-OC**

Pat Hughes, Radio Play-by-Play Announcer for the Chicago Cubs wrapped up the day at the 56th Annual Midwest Turf Clinic.

Scott Verdun pedals to illuminate a few lights to demonstrate the amount of power that a candescent bulb uses compared to newer compact fluorescent bulbs. Maybe next year we can power the LCD projector with the bike and take turns.