

Tour Shows How Crown Vetch Controls Erosion On Farmland

UNIVERSITY PARK, Pa. — Crown vetch, the pink-flowered perennial planted along highways to control erosion, is an effective living mulch for cropland, said an agronomist in Penn State's College of Agricultural Sciences.

Those interested in seeing research and demonstration plots of crown vetch are invited to a living mulch tour from noon to 3:30 p.m. on July 14 at Penn State's Agronomy Research Farm. The farm is at Research Gate B of the Russell E. Larson Agricultural Research Center, Rocksprings, nine miles southwest of State College on Rt. 45. Lunch will be provided at no cost.

"Crown vetch can be used as an alternative to terraces, contour strips and dead residue mulch," said Nate Hartwig, professor emeritus of weed science.

"When managed correctly, crown vetch forms a vegetative

cover, virtually eliminating runoff of rainwater, topsoil, nutrients and pesticides," said Hartwig. "It also allows farmers to plant agronomic crops, rather than planting sod crops to reduce soil erosion."

Hartwig has been studying the use of crown vetch as a living mulch for corn, small grains, and soybeans since 1973. His research compares test plots with no soil cover, plots with surface crop residue, and plots with crown vetch.

"Tilled plots with no soil cover on a 14 percent slope can lose about 12 to 14 tons of topsoil per acre per year," said Hartwig. "Plots with cornstalk residue lose an average of one-quarter to one-half of a ton of topsoil per year. That's about a 95 percent reduction in soil loss."

"Plots with crown vetch show the most dramatic reduction, losing only about 50 pounds of topsoil per acre per year. That's

about a 99 percent reduction. At the same time, the plant's roots penetrate deep into the soil, improving tilth and water infiltration."

At \$10 a pound, crown vetch costs about \$10 per acre to establish. "But once in place, it should last forever," said Hartwig. "It's almost impossible to kill it accidentally with herbicides. At the same time, the plant is easy to suppress so that it doesn't compete with crops. In the long run, it can be less expensive than other conservation measures."

Crown vetch is compatible with all crop rotations, including corn, soybeans, small grains, alfalfa, and alfalfa/grass mixtures. It doesn't decrease crop production, and it requires no special tools or chemicals to manage it. "In addition, it has nutritional value equal to alfalfa, so it can be used as a forage," said Hartwig.

Crown vetch normally takes two to three years to become well established. "Once established, it fixes nitrogen, a portion of which becomes available to crops such as corn," said Hartwig. "Our research shows that yields of 100 bushels of corn per acre are possible in fields with a crown vetch cover without any added nitrogen."

For more information about using crown vetch as a living mulch, contact your county Penn State Cooperative Extension

office, district conservationist, or Nate Hartwig. Information on how the system works can be found in the 1999-2000 Agronomy Guide, available on the World Wide Web at <http://AgGuide.agronomy.psu.edu/>.

Paper copies of the guide are available at county extension offices or from the College of Agricultural Sciences Publications Distribution Center, 814-865-6713.



THE HARDEST JOB!

John Berry
Ag Marketing Agent
Lehigh County

Good managers create, not consume, workplace energy.

Remember the four "classic" functions of management — plan, organize, lead, and control — that you learned in school? Although these basic functions are fine for taking care of most of your day-to-day management duties, they fail to reflect the new reality of the workplace and the new partnership of managers and workers.

Today's managers need a new set of management functions — based on forging a strong employee/employer relationship:

- Energize. Today's managers need to be masters of making things happen. You can be the best analyst in the world or the most highly organized executive on the planet, but if the level of excitement you generate can be likened more to a dish rag than to a spark plug, then you may never have what it takes to create a truly great environment. Great managers create far more energy than they consume. Instead of taking energy from the organization, the best managers channel and amplify energy to the organization.

- Empower. Great managers allow their employees to do great work — they empower them to excel. This is a vital function of management be-

cause even the greatest managers in the world cannot succeed all by themselves. To achieve the goals of the organization, managers depend on the skills that their employees offer. Effective management is the leveraging of the efforts of every member of a work group toward a common purpose. If you are constantly doing your employees' work for them, not only have you the advantage of leverage that your employees can provide, but you are also putting yourself on the path to stress.

- Support. The key to creating a supportive environment is establishing openness throughout an organization. In an open environment, employees can bring up questions and concerns — in fact, they are encouraged to do so. When employees see their managers are open to new ideas, they are more likely to offer suggestions and new ideas.

- Communicate. Information is power, and as the speed of business continues to accelerate, information must be communicated to employees faster than ever before. Constant change and increasing turbulence in the business environment necessitate more communication, not less.

Management is not what you do to people, it's what you do for them. Managers who truly manage their employees — who energize them, empower them, support them, and communicate with them — will attract and retain key employees because they build trust and commitment.

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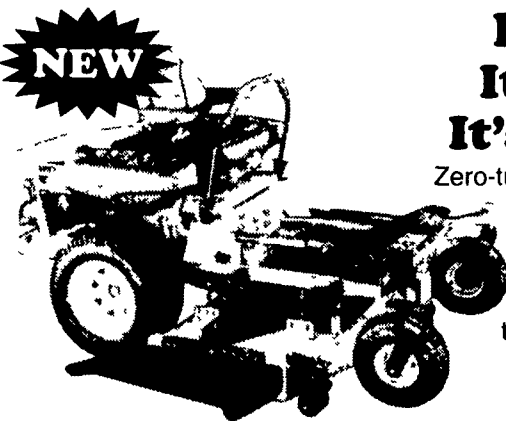
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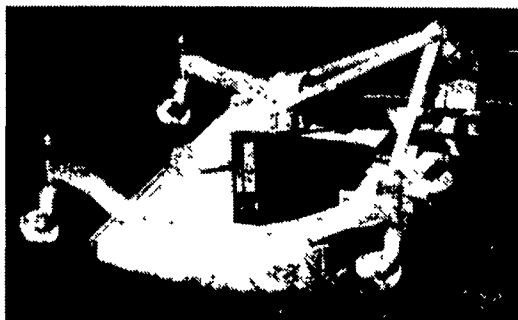
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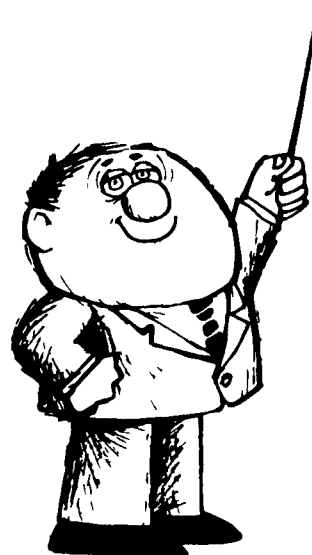
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