
Inventions ready for region's businesses

Tri-City Herald, October 25, 1998

Local business owners and entrepreneurs have a new resource for finding technologies with practical value for the Mid-Columbia region. Pacific Northwest National Laboratory staff have screened the lab's technologies and are identifying those with the greatest regional applicability.

The Internet-based list features new ideas from the Laboratory that can be used by local firms and support local economic growth. Staff update the list every two months as new inventions become available.

"Though business owners and entrepreneurs want to access the Laboratory's innovations, some may be unsure of how to do it or which ones may apply to their situations," said Linda Walker of the Laboratory's Economic Development Office. "We decided to look more closely at certain inventions and periodically publicize those most suitable for the surrounding area."

The listed technologies are available to anyone, Walker said. Individuals and organizations can negotiate to obtain licenses to further develop or commercialize technologies for specific applications.

The first five technologies include:

- Impervious fence posts -- Scientists have developed an idea to use resins from telephone wire waste to create extruded or wound fence posts with highly resilient properties. An orchardist or vintner may use these as seedling supports. On a larger scale, telephone companies may use the posts as an alternative to wooden telephone poles.
- Biodegradable dust suppressant -- The Laboratory has made available a biodegradable dust-control agent. This long-lasting material supplies nitrogen-based organic fertilizers. The material has the consistency of light gravy when applied, and hardens in about one hour into a fairly durable crust with excellent soil-binding properties. It also functions as a fertilizer, eventually breaks down in the soil and allows plants to grow through the crust. This product has been shown to be effective in controlled wind-tunnel tests and in field tests on crops. Production costs are anticipated to be less than \$50 per ton. Other dust control applications could include road cuts and similar excavations.
- Improved eyeglass frame hinges -- A patented eyeglass frame hinge is available for licensing. This improved hinge design is a wire loop configuration that improves the hinge flexibility and reduces its susceptibility to accidental deformation, breaking or misalignment. The screw-less hinges offer strong advantages in ease of installation, adjustment and replacement. The hinge contributes to the more slender appearance now favored by eyeglass wearers.
- Tumbleweed-based fuel source -- The plentiful supply of tumbleweeds in our region prompted a Laboratory scientist to evaluate the combustion properties

- of these indigenous plants. As a result, using the tumbleweeds as the base for pellets led to the discovery of an alternative fuel source.
- Plastics extraction and recycling process -- This technology uses conveyor belts and heaters to sort thermoplastics for recycling. The plastics can be separated and sorted from other scrap materials based upon their thermal characteristics. A recycling company might add this process to its existing service and ship the raw byproduct to a manufacturing or fabrication plant.

Several technologies have already proven popular with Mid-Columbia businesses, according to Walker. "The Laboratory's technologies have been used as the basis for local companies ranging from a mechanical grape vine pruner to an automated system for business purchases," she said. The Laboratory offers more than 1100 technologies for commercialization. Staff also can provide technical assistance and direct people to additional community resources.