

## AUTOMATIC EGG INJECTION SYSTEM

**Embrex**  
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### INNOVATION

An automatic vaccine delivery system (Inovoject®) that enables poultry producers to inoculate chicks *in ovo* (in the egg) .

### ACCOMPLISHMENTS

- ▶ Developed the Inovoject® system that injects viral, bacterial or fungal vaccines into avian eggs.
- ▶ Inovoject® system has allowed for the development of *in ovo* avian vaccines, including one by Embrex that targets bursal disease.
- ▶ Benefits of *in ovo* vaccination via the Inovoject® system compared to post-hatch vaccination include earlier immunity reduced bird stress, precise and uniform injection, lower labor costs, and reduced contamination.



### COMMERCIALIZATION

- ▶ Created technology that allows for a new class of vaccines delivered *in ovo* rather than post-hatch.
- ▶ Embrex received USDA approval for Bursaplex® vaccine, the first single-dose *in ovo* infectious bursal disease vaccine, and approved in over 20 countries.
- ▶ Over 42 Inovoject® models are available and operating in 30 countries.

### IMPACTS

- ▶ Approximately 9 billion eggs are injected each year by the Inovoject® system.
- ▶ The Inovoject® system is the industry standard, vaccinating approximately 85% of the U.S. broiler market.
- ▶ Revenues derived from the technology totaled \$46 million dollars in 2004 and have contributed to the growth of a company with 300 employees worldwide.

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