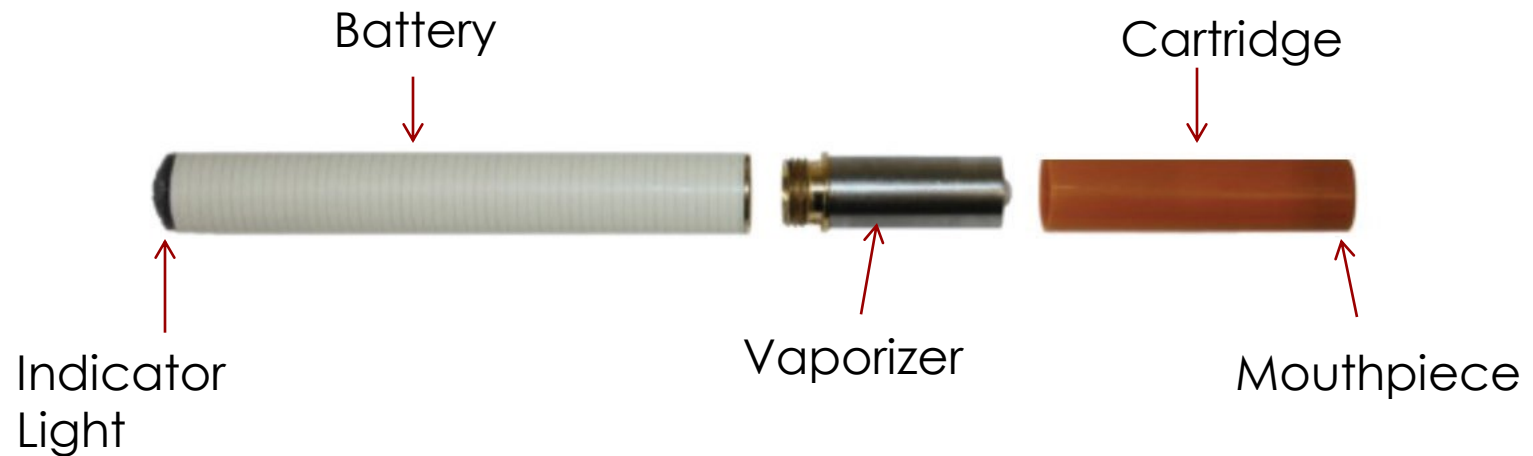


E-Cigarettes: A Game Changer

Dr. Blake Brown
Hugh C. Kiger Professor
Agriculture and Resource Economics
College of Agriculture & Life Sciences

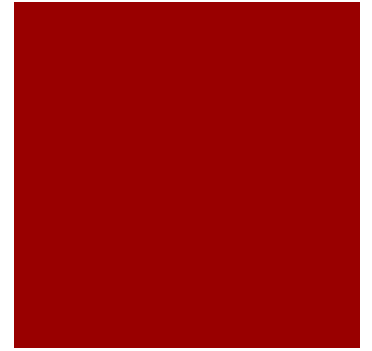
NC STATE UNIVERSITY

What is an e-cigarette?

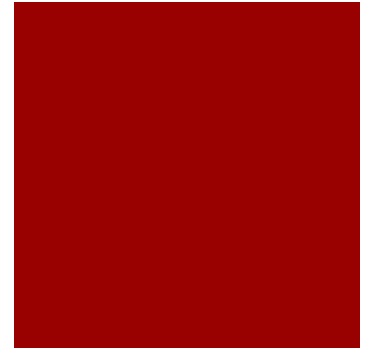


Vaporizes a nicotine solution, contained in the cartridge, to create a mist that is inhaled.

Many different types



Makers have different strategies



- Some want it to look, feel, taste like a traditional cigarette
- Some want it to be clearly distinguishable from a traditional cigarette
- Some do not want to even call it a cigarette

Commonly Cited Reasons for using e-cigs:

- **83% because they perceived e-cigs to be less toxic than traditional cigarettes**
- **79% to aid in satisfying tobacco craving**
- **66% to deal with tobacco withdrawal symptoms**
- **57% cheaper than smoking**
- **46% to help with quitting smoking**
- **43% to avoid bothering others with smoke**
- **39% To deal with situations where I can not smoke**
(3037 in survey)



Source: Etter, JF, Bullen C. "Electronic cigarette: users profile, utilization, satisfaction, and perceived efficacy." *Addiction* 2011(106): 2017-2028

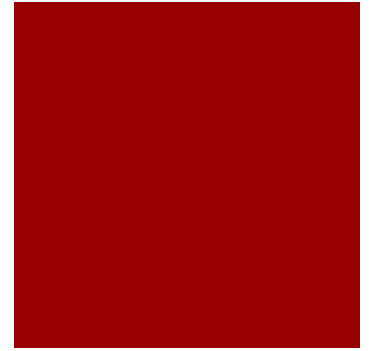
E-Liquid: nicotine solution used in e-cigarettes



- Currently nicotine is derived from tobacco
- Usually dissolved in solution of propylene glycol, vegetable glycerin, or polyethylene glycol
- Synthetic nicotine is currently expensive to manufacture and, in the U.S., would be regulated as a pharmaceutical instead of a tobacco product

Manufacturers

- Invented in China
- Many e-cigarettes are manufactured in China
- Growing quantity manufactured in U.S. where e-liquid comes from U.S. suppliers...but this doesn't necessarily mean it is derived from U.S. tobacco



Health Advocates: **Divided**



- *"What we are doing first is tracking, and we are seeing some very concerning trends. Use of e-cigarettes in youth doubled just in the past year, and many kids are starting out with e-cigarettes and then going on to smoke conventional cigarettes."*
CDC Director Dr. Thomas Frieden
- "This is basically what I would call a harm reduction strategy," said Michael Siegel, a public health professor at Boston University

Regulation

- FDA-Tobacco Products Center will regulate...no indication of how yet
- EU Tobacco Products Directive...initial proposal would have regulated as a medicinal.

Parliament rejected...new amendment which includes restrictions on age at purchase (18), bans internet sales, ingredient reporting, health warning, advertising ban, specs on nicotine content, additive restrictions

Regulation

- FDA regulation could be similar to proposed amendment to EU TPD
- Restrictions are being implemented by some states and municipalities
- Over-regulation could stifle and maintain smokers in traditional cigarette market
- Moderate regulation could benefit companies manufacturing in U.S.
- **Taxation????**

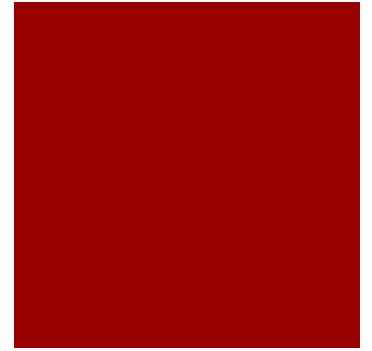
E-Cigs is in **Infancy**; both in technology and market



- U.S. E-Cigs retail sales projected to reach **\$1.8 billion** by end of 2013
(source: Wells Fargo Securities)
 - Volume projected to grow by over 30% annually (Wells Fargo)
- U.S. Tobacco Products Market, 2012: **\$108 Billion** in retail sales
(source: Euromonitor)
 - Declining in volume...about 4% this year (TMA)
 - Revenues still growing...forecast to grow 1.4-2.7% in 2012 (Euromonitor)

Market Projections:

- E-Cigs may surpass traditional cigarette sales in volume by **2047** (Bloomberg)
- E-cigs may surpass traditional cigarette sales in volume by **2023** (Wells Fargo Securities)



E-Cigs are a Disruptive Technology



- Change may be dramatic, but is difficult to forecast
- Technology and characteristics of market may change dramatically
- Many companies in start-up phase (over 250), but consolidation will occur...a few winners and many losers
- “Big Tobacco” has entered market

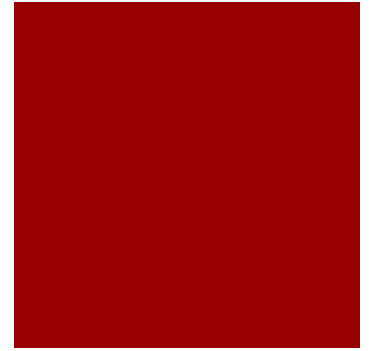
Will E-Cigs be the product that takes the smokers' market?



- E-cigarettes are the current emerging technology for nicotine delivery
- Do e-cigs help smokers quit or just cut down (and maybe keep them smoking)
- But other “reduced risk” products are being developed e.g.
 - Ploom: heats tobacco but does not combust it
 - PMI is developing products that heat tobacco but do not combust it
 - Will these deliver a more satisfying experience to smokers than e-cigs?

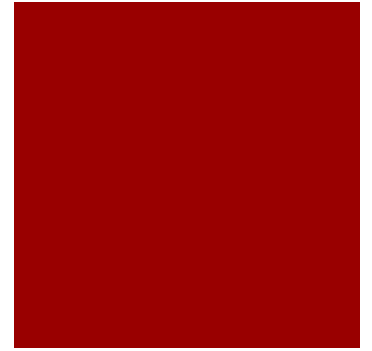
What can we say about E-Cigs?

- **Regulation is a key factor in how market will develop**



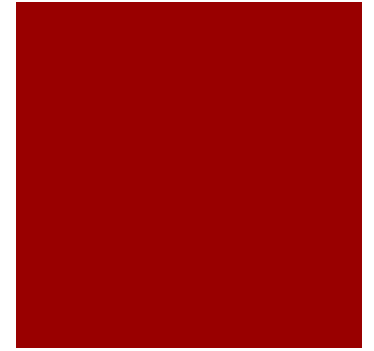
What can we say about E-Cigs?

- Regulation is a key factor in how market will develop
- **Given reasonable regulation, expect explosive growth in the category**



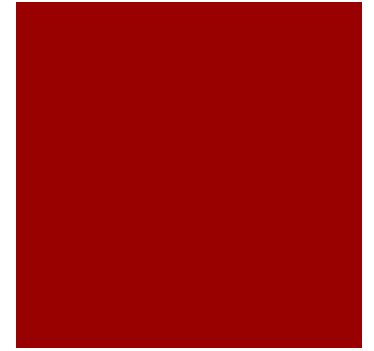
What can we say about E-Cigs?

- Regulation is a key factor in how market will develop
- Given reasonable regulation, expect explosive growth in the category
- **Big Tobacco will grow category; expect reduction in number of small firms**



What can we say about E-Cigs?

- Regulation is a key factor in how market will develop
- Given reasonable regulation, expect explosive growth in the category
- Big Tobacco will grow category; expect reduction in number of small firms
- **How the technology develops is unpredictable**

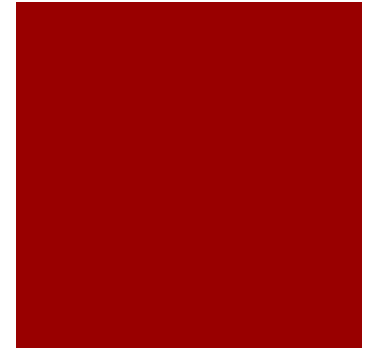


What can we say about E-Cigs?

- Regulation is a key factor in how market will develop
- Given reasonable regulation, expect explosive growth in the category
- Big Tobacco will grow category; expect reduction in number of small firms
- How the technology develops is unpredictable
- **E-cigs will be both a way for smokers to stop smoking and to get their nicotine where they can not smoke...i.e. e-cigs are a viable substitute for traditional cigarettes. Are they also a complement?**

What can we say about E-Cigs?

- Regulation is a key factor in how market will develop
- Given reasonable regulation, expect explosive growth in the category
- Big Tobacco will grow category; expect reduction in number of small firms
- How the technology develops is unpredictable
- E-cigs will be both a way for smokers to stop smoking and to get their nicotine where they can not smoke...i.e. **e-cigs are a viable substitute for traditional cigarettes. Are they also a complement?**
- **How quickly and how much market share will e-cigs take from traditional cigarettes????**





www.tobaccogrowerportal.org