

Text Annotation:

As you read, use the codes described below to annotate the text. Please complete all steps and follow directions exactly.

1. Highlight key terms and underline their definitions.
2. Circle unfamiliar words and define them in the right margin
3. Note the topic of each paragraph and the author's argument (what she is attempting to prove) in the left margin
4. List the main topics/arguments of the text at the end or on the back. Number or color-code each of these.
5. Code the text with the numbers/colors in step four by writing them next to the lines where key information for each topic/argument is discussed.
6. In the top right corner on the first page write a short summary of the text, no more than 10 words.

Example:

CORN ETHANOL PRODUCTION USING CORN

INTRODUCTION

The United States desperately needs a liquid fuel replacement for oil in the future. The use of oil is projected to peak about 2007 and the supply is then projected to be extremely limited in 40–50 years (Duncan and Youngquist, 1999; Youngquist and Duncan, 2003; Pimentel and others, 2004a). Alternative liquid fuels from various sources have been sought for many years. Two panel studies by the U.S. Department of Energy (USDOE) concerned with ethanol production using corn and liquid fuels from biomass energy report a negative energy return (ERAB, 1980, 1981)¹. These reports were reviewed by 26 expert U.S. scientists independent of the USDOE; the findings indicated that the conversion of corn into ethanol energy was negative and these findings were unanimously approved. Numerous other investigations have confirmed these findings over the past two decades¹.

Living things used for fuel

Left out

Supported with money

A review of the reports that indicate that corn ethanol production provides a positive return indicates that many inputs were omitted (Pimentel, 2003). It is disappointing that many of the inputs were omitted because this misleads U.S. policy makers and the public.¹

Shapouri (Shapouri, Duffield, and Wang, 2002; Shapouri and others, 2004) of the USDA claims that ethanol production provides a net energy return.¹ In addition, some large corporations, including Archer, Daniels, Midland (McCain, 2003), support the production of ethanol using corn and are making huge profits from ethanol production, which is subsidized by federal and state governments.^{2,3} Some politicians also support the production of corn ethanol based on their mistaken belief that ethanol production provides large benefits for farmers, whereas in fact farmer profits are minimal.² In contrast to the USDA, numerous scientific studies have concluded that ethanol production does not provide a net energy balance, that ethanol is not a renewable energy source, is not an economical fuel, and its production and use contribute to air, water, and soil pollution and global warming⁴ (Ho, 1989; Citizens for Tax Justice, 1997; Giampietro, Ulgiati, and Pimentel, 1997; Youngquist, 1997; Pimentel, 1998, 2001, 2003 NPRA, 2002; Croysdale, 2001; CalGasoline, 2002; Lieberman, 2002; Hodge, 2002, 2003; Ferguson, 2003, 2004; Patzek, 2004). Growing large amounts of corn necessary for ethanol production occupies cropland suitable for food production and raises serious ethical issues⁵ (Pimentel, 1991, 2003; Pimentel and Pimentel, 1996).

People think ethanol from corn is good but it's really bad.

T: making of fuel from corn

A: not a good idea

*T: reports about corn ethanol
A: reports are misleading*

T: Ethanol bad idea

A: Companies profit, gov. pays, not good for environment, reduces food

Topics/Arguments:

1. *Most reports on ethanol are bad*
2. *Only big companies are profiting*
3. *Cost the government money*
4. *Not helping the environment*
5. *Reduces food*