Michael Pollan is an American journalist who has written for The New York Times Magazine and Harper's Monthly. He received a prize for excellence in environmental journalism.

His book, the Botany of Desire, is a collection of four essays. His considerable research skills, intelligence and sense of humour created a book both profound and fun to read.

He examines relationships between civilizations and four plants: apples, tulips, marijuana and potatoes. The stories are interesting and their value enriches dinner time chatter. Each essay examines a different facet of the current relationship between nature and American culture.

Starting with the apple, Pollan revisits that allegedly wholesome as the girl-next-door and a slice of you-know-what, American folk legend, Johnny Appleseed. Yes there was a Johnny Appleseed. His real name was John Chapman. He planted apple seeds along the American frontier during the early nineteenth century.

But apple seeds don't grow true to type which means seeds from a MacIntosh apple will yield all manner of apple trees, each with a distinct fruit, and none necessarily resembling a MacIntosh.

Johnny was planting apple seeds, but he wasn't contemplating snacking apples. Johnny's apples, a riot of bitter, acidic and unpalatable fruit, were ideal for fermenting into cider. If the cider was frozen, the brew could be further concentrated into apple jack. Johnny was anticipating a demand for stronger drink as the American west was settled. Apple cider and apple jack were the business of America's early apply growers. It was the Prohibition which forced apple growers to reposition their product as a dessert apple that if eaten daily could keep the doctor away.

From apple seed anecdotes, Pollan proceeds to an engaging look at preserving biodiversity: an issue of profound consequence for humankind.

Similarly, in his essay on potatoes, he goes beyond the migration of the potato from South America to Europe, beyond the adoption of the potato as the Irish peasants' staple, and beyond the tragedy of famine to an exploration of what may be gained and lost by the use of genetically modified foods.

Pollan says, "The metaphors we use to describe the natural world strongly influence the way we approach it, the style and extent of our attempts to control it. It makes all the difference in the world if one conceives of a farm as a factory, or a forest as a farm. Now we're about to find out what happens when people begin approaching the genes of our food plants as software."

The issue is a proprietary potato plant containing bacterial genes which cause every cell to produce a compound toxic to caterpillars. This plant may offer savings to potato growers.

Presently, in Idaho, conventional potato growers sow thousands of acres of a single potato variety on a three year rotation. First, they apply soil fumigant, then a pre-emergent herbicide and a systemic insecticide at planting. When the plants are six inches tall a second herbicide is applied along with ten weekly applications of fertilizer, a fungicide and an insecticide. The cost of this is \$1,950 per acre. The grower may earn \$2,000 for the twenty tons of potatoes harvested.

In contrast, Idaho's organic potato growers rely on five year rotations, green manure, cattle manure, decoy plants, and a mix of potato varieties with varying susceptibilities to diseases, pests and weather conditions. Organic potato farmers have higher labour costs; they hoe rather than spray weeds. However, they earn almost twice as much for their crop and the cells of their tubers aren't synthesizing insecticide. In this case, the organic approach appears more environmentally sustainable and economically viable.

Pollan leads brilliantly from the light into the dark where he leave us to think.