

## The Roundup Ready Gene—will it create world starvation?

### *Synopsis:*

In my lifetime, hand weeding of crops has been replaced by chemical herbicides, one of which is Roundup (Glyphosate) manufactured by the Monsanto corporation. Monsanto developed a Roundup Resistant (RR) [gene](#) which it has already incorporated into many different crops, and is apparently planning to introduce in wheat in 2003.

**Incorporating the same gene into different food crops makes a major part of the world's food supply vulnerable to a SINGLE disease.**

The historical precedent for this fear was the introduction of a single gene into 85% of the US [corn](#) crop. In 1970 a disease epidemic attacked all corn plants containing that specific [pleiotropic](#) gene. The epidemic panicked the US stock market and threatened the existence of a 1971 crop. **WHEN** the disease specific to the RR gene appears, **world starvation is likely**. At the present time, use of Roundup in the [Drug War](#)

in Columbia directly threatens the lives of the indigenous population. For water quality and human health, the risk from Roundup may lie in [impurities](#) it contains.

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When I was a kid

on the farm, the only way to remove weeds competing with crops was by hand. Local families gave birth to many children they could hire out to support the parents.

Then scientists discovered they could replace kids with chemicals. However, these chemicals are very toxic to people as well as the environment, and must be removed by water systems to produce pure drinking water. Monsanto had been marketing Roundup (glyphosate) as a major part of the company income, but the patent was due to expire. Therefore, the company developed a [roundup resistant](#) (RR) gene and incorporated it into soybeans, canola, corn, and other crops. Without the RR gene, these crops are killed when Roundup is applied to kill weeds. With the RR gene, the crops survive Roundup application. On the surface, this seems like an excellent way to minimize the problem of toxic herbicides.

Monsanto controls production of the seeds and requires farmers to sign legal agreements that they will use Roundup to control weeds in their crops and that they will not replant seeds they produce nor distribute them to their neighbors. Monsanto is also working to control the [water](#) farmers need to grow crops. In other words, Monsanto is developing a business in which it has total control of the world food supply. This sounds like a violent sci-fi horror movie, but is very real. ([return](#))

The potential sequel to this movie is also very real. Hybrid corn is the basis for the US food supply and economy. Producing hybrid seed requires the transfer of pollen from a male parent of one genetic line to the female parent of another genetic line. The resulting seed produces a plant with "hybrid vigor." Corn is a self-pollinating plant. To produce hybrid corn it was necessary to detassel the female parent before pollen maturity. This required paying a large number of kids, usually kids who needed money for college in the fall.

Then scientists developed a gene (cytoplasmic male sterility - CMS) to render the female parent unable to produce male pollen. It produced high profit for its corporate users who used it to produce 85% of US corn crop. CMS was exalted as **the ultimate scientific achievement**—until 1970 when a [disease](#) adapted specifically to that gene produced an epidemic of Southern Corn Leaf Blight (SCLB) and struck down a major part of the corn crop, threatening the existence of the 1971 crop and throwing the stock market into a panic. The kids (now Mexican, not needing college money) are back manually detasselling corn. ([return](#))

A quarter century elapsed from introduction of the CMS gene to the CMS-SCLB destruction of part of our food supply. The RR gene has been used only since 1996 into a rapidly expanding part of our food supply. Monsanto declared RR safe, but no testing has been done to see whether it is a [pleiotropic](#) gene as was the CMS gene. ([return](#))

Plant diseases seldom move

from one species of plant to another. However, the RR gene incorporated into many species breaks the normal species boundary restraints. **WHEN**

a disease adapts to the RR gene it can quickly destroy other food crops. **WORLD STARVATION? ([return](#))**

The [literature](#) indicates that Roundup is a relatively safe compound. However, that positive information originates with Monsanto, a company known to [manipulate](#) statistics to its own advantage, and [cycle](#) its employees into critical governmental regulatory roles, building a [major part](#) of its income on graft. Thus it is not possible to determine the safety of Roundup.

The safety of Roundup itself may not be the critical issue. No chemical compound is ever totally [pure](#). In the case of agent orange, one of [Monsanto's](#) income producing products during the Vietnam War, [dioxin](#) was a critical impurity whose effects are still being felt.

Now we are fighting another undeclared war in Columbia, South America. Income for Monsanto is a major expense to US taxpayers, who have already [forgotten](#) the lessons of the Vietnam war.

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