Food Increase Yield Solutions

The need to Feed 9 billion people by 2050 is becoming a bigger and bigger problem. We will have to feed more people in 40 years that have been in the last 10,000 put together. If the world’s farmers continue to produce the same amount of crops that they have lately at the same rate, starvation and malnutrition will suffer the world’s population. Unless farmers treble their yields, this will become a reality. There are two ways that food production can be increased with- technology or increased organic farming without the use of chemicals.

Monsanto, the largest producer of genetically modified crops believes that they are the way forwards for agriculture. They produce 90% of genetically modified crops on the market. GM crops are crops that grow faster and have higher yields than “normal” crops, by changing their DNA. Within 12 years, the amount of land used to produce GM crops has increased by a factor of 80. This has provided a lot more food in a much shorter period of time, but it contaminates the ground water and can spread disease to people, other crops and animals unless properly tested. They crossbreed animals and plants, disrupting 500 million years of evolution, and no one knows what the consequences to this are. Genetically modified crop seeds are more expensive for farmers to buy, but the income per acre is the same as before.

Irrigation is another way to increase crop yields. By using irrigation, farmers can choose when to water their crops and how much to water them instead of waiting for the rain to come. The water from irrigation comes either from ground water wells or rainwater harvesting. Both of these provide large amounts of water to help crop growth, but they both cause problems. If chemicals are added to the irrigation water, the soil could become acidic and the underground water systems become polluted, resulting in water that isn’t clean and is in some cases too contaminated to drink. Also, if the water used for irrigation is taken from freshwater dams, there won’t be much left for people to drink.

Factory farming is another way we can solve the world’s hunger problems. Factory farming is when you breed many animals within a small area to get a high amount of food per acre. Animals are bred, grown up and slaughtered, all within the walls within the factory. Technology within factory farms has increased the amount of meat that can be produced dramatically, for example chickens can now be matured in 7 weeks instead of their natural 3 months. However, 90% of all pigs that are raised to become food have lived in confinement. Pigs are very intelligent and emotional animals that can be driven to madness because of confinement- fighting and cannibalism sightings are not unusual in factory farms with pigs.

Fertilizers, pesticides, irrigation and different seed practices can help reach the goal to feed 9 Billion people by 2050. Fertilizers make plants mature faster, allowing for more crops being grown over the same period of time over the same amount of land. When fertilizers are used, the soil gets exhausted much faster than when they aren’t because there’s a lot more nutrients being removed from it from the crops. The fertilizers contaminate and add to greenhouse gases since some of them contain methane. Also, radioactive elements in the fertilizers can cause cancer, as Polonium-210 causes around 11,700 lung cancer deaths a year.

Pesticides are used to kill pests that can eat through entire crops in minutes. This wastes a lot of food, which we could eat, and makes farmers have to spend a lot of money on new seeds having lost from their previous crop. Pests can also contaminate the harvested crop with disease making it inedible. After a time the pests start growing a resistance to the pesticides, which become useless. Pesticides can harm humans, so in the UK strict controls are placed on them. These controls have made farmers in the United Kingdom use pesticides as a last resort and because of this the usage of them has gone down by a third since 1983.

Instead of relying on high tech solutions to improve our crop yields, we can change our diets and the way we do things, or make small changes to provide a big change in the future. Organic Farming, reduced waste, changed diets and better storage techniques are just some of the things we can use to help feed 9 Billion people by 2050.

Organic farming is increasing by about 10-15% a year within the EU. Organic farming is when the use of any pesticides, herbicides, GM crops or similar techniques to make crops grow faster is not used. Plants and animals natural to their environment are used to make them feel more comfortable and factory farming is not organic. Only natural techniques and practices are used, producing food that is better for both you and for the environment.

When plants are used to create meat for humans to eat, 90% of the energy put into the animal is lost. This means that if we keep eating meat to the same extent as we do today and don’t change our diets soon, not enough energy will be put out from the farms to feed everyone by 2050. If less meat is consumed, much more energy can be used to feed more people with fruit and veg.

£680 worth of food is wasted a year by the average English family with children. This adds up to 8.3 million tonnes a year, all down to the dump. If this food were to be eaten it would cut down the CO2 Emissions as much as removing ¼ of the cars in the world off of the road. The best before date on foods in the supermarkets is only considering the quality aspect of it rather than the safety aspect. When most foods have past their best before dates it just means that they aren’t up to the same standards as before that date. Only eggs can’t be eaten after their best before dates.

When food is stored improperly it will last a lot shorter than when it is stored in proper airtight places. When food is stored in airtight places or containers no bacteria or disease from outside can get in. It also stops mould and bacteria from consuming on it. This will prolong the life of the food, meaning that it won’t be thrown away as quickly.

Intercropping of different crops can help prevent mass eliminations of one specific crop for a farmer. If a drought, disease or pest is specific to one crop and multiple crops are planted over the same areas of land the loss will be a lot less than when the land is used to grow one type of crop solely.

Political factors also affect how food can be grown. The status of women in some cultures is so low that they can’t work on the farm. This means that less of the crops can be harvested before they die. The health of the workers can also affect how the crop is harvested. If half of the workforce in one piece of land becomes ill then only half the amount of crops can be harvested. Better healthcare and medicines will prevent this and give a more efficient yield of the crops.

Big changes and sophisticated technology is not required to help feed more people, just better diets, practices, better healthcare, and less waste will easily help us overcome the world starvation crisis.

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