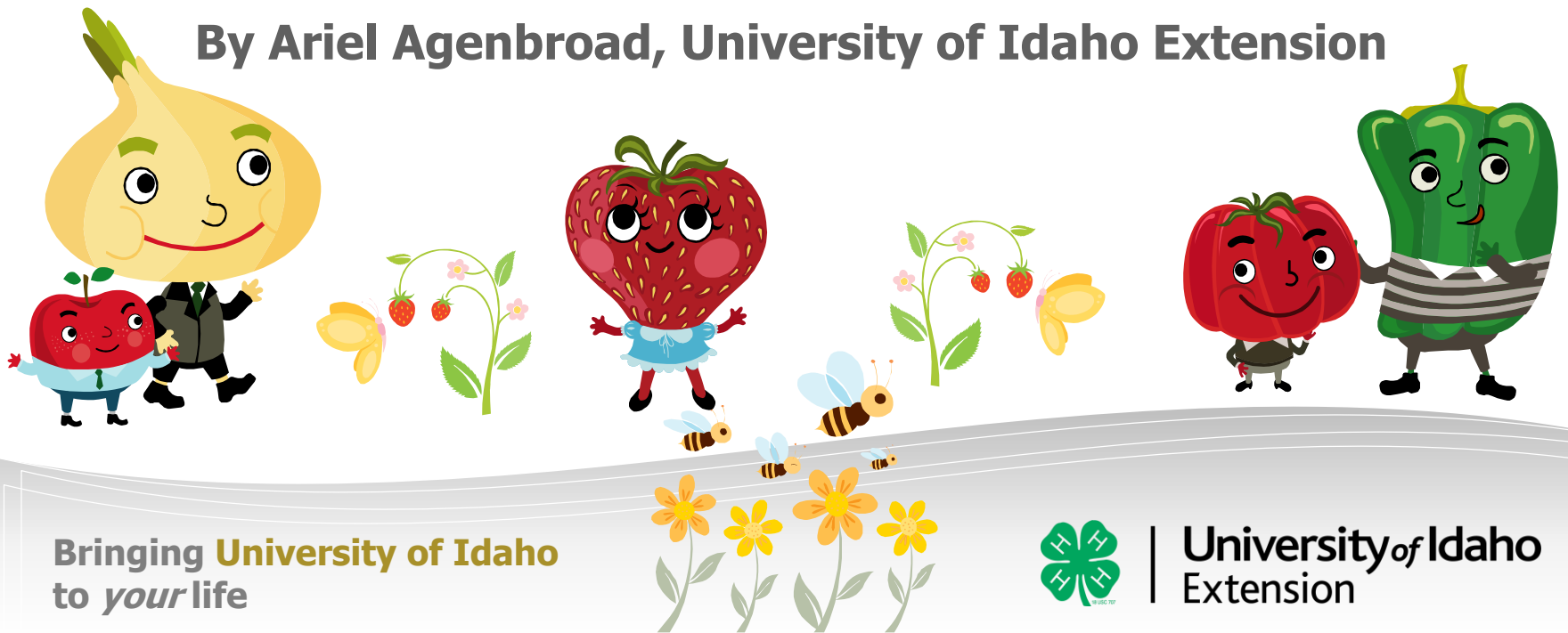




“Dirty” Hands, Clean Food

Best Practices for School Gardens in Idaho

By Ariel Agenbroad, University of Idaho Extension



Bringing **University of Idaho**
to *your* life



University of Idaho
Extension



What are the risks?

- **General safety risks associated with being outdoors**
- **Allergies or sensitivities**
- **Ingestion of non-food plants**
- **Contamination of fresh produce**
- **Spoilage or contamination of harvested, prepared or stored produce**





POP QUIZ!! True or False?

- T** Bacteria such as Salmonella and E. coli O157:H7 cause food borne illnesses.
- T** Food crops can become contaminated by coming in contact with animal droppings, human waste, polluted water, dirty equipment or utensils.





Before a Garden Goes In...

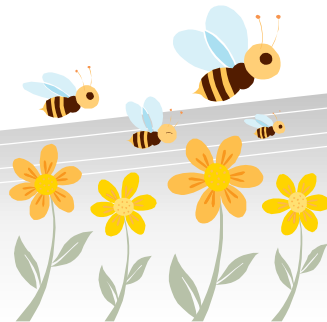
- **Locate garden away from wells, septic systems, in ground tanks or dumpsters**
- **Avoid low lying, poorly drained soils**
- **Test soil for lead & avoid areas where lead level is above 300 ppm**
- **Test irrigation water**





Can Compost Happen Safely?

- **Compost is necessary for improving soil quality and health**
- **Make sure commercial compost has been produced so that correct temperatures have been reached for the appropriate length of time**
 - **131° F for 3-15 days depending on type**





Season-long Safety

- **All children participating in a garden:**
 - **should have parental permission slips on file with information on allergies or sensitivities**
 - **should wear shoes, gloves, hats and sunscreen when in the garden**
 - **should not eat anything from the garden without adult approval!**

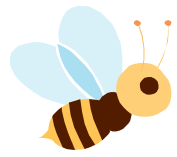




Chemical Concerns

- **Keep all herbicides, fungicides or insecticides at least 25 feet away from the garden and stored out of reach**
- **Manage insects with scouting, hand removal and organic controls**
- **Manage weed with cultivation, hand weeding and mulches**





Uninvited Garden Guests





POP QUIZ!! True or False?

T Water and soap do not kill germs

F Ten seconds of vigorous scrubbing in cold water is sufficient to remove germs like Salmonella and E. coli from hands.

T It is not necessary to use antimicrobial soap.





Lowdown on Washing Up

- Wash hands before gardening
- Wash hands after gardening
- Wash hands before & after harvesting
- Wash hands before eating
- Wash produce before eating
- Don't wash produce before storing...?





From Garden to Kitchen

- Use only clean, **food grade** containers to harvest and transport produce
 - Plastic or stainless steel kitchen colanders or bowls, 5 gallon food grade buckets
 - Paper grocery bags
- Plastic trash bags or bins or reused chemical containers **are not food safe**
- **Brush, shake or rub off excess soil**



POP QUIZ!! What's wrong with this picture?



**** CROSS CONTAMINATION!****



Safety in Preparation

- Wash hands prior to handling produce
- Rinse fresh produce under cool running water, even skins and rinds
- Never use soap, detergent or bleach
- Avoid cross contamination w/ foods
- Clean work surfaces, utensils, hands
- Sanitize work surfaces with dilute bleach solution (1 tsp. : 4 cups water); air dry





Safety in Preservation

- **Try to avoid washing prior to storage**
 - Microbial growth is faster in water
- **If washing is necessary, dry produce before storing**
- **Store unwashed produce in plastic bags or containers, keep bins clean**
- **Store produce at 40° F in refrigerator**





About Storage

- Onions, potatoes can be kept in cold, dry, pest free areas
- Refer to a storage chart for length of time to store fresh produce safely
- Do not use fresh, cut up fruits or veggies if they have been held at room temperature longer than 2 hours or one hour above 90 degrees F unless cooking





Additional Safety Concerns

- **General best management practices apply to most produce from school gardens, local farms & distributors**
- **USDA has prepared extra guidelines for handling melons, tomatoes, leafy greens and sprouts**
 - http://www.fns.usda.gov/fns/safety/pdf/best_practices.pdf

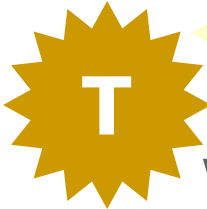




POP QUIZ!! True or False?



School garden-grown produce is inherently unsafe and should not be fed to children.



Food crops become contaminated with harmful microbes by coming in contact with animal droppings, human waste, polluted water, dirty hands, equipment or utensils.





Integration with Foodservice

- Children will be very excited for this
- Kitchen staff...
- Kitchen must be equipped to receive, process and store fresh produce
- Produce supply may be inconsistent on many levels
- Communication will be key





School Garden Produce is an Approved Source in Idaho!



Thank you for your request for information regarding the use of produce grown in school gardens. This letter is to advise you that the practice of using produce grown in and harvested from a school garden is acceptable for use in school kitchens and classrooms.

grown in and harvested from a school garden is acceptable for use in school kitchens and classrooms.

Along with all other good food safety practices, the growing, harvesting, handling and storage of produce should be monitored to protect against any possible biological or chemical contamination. Once harvested, the produce should be carefully washed with clear water prior to service. It is recommended that the temperature of the wash water be similar to the temperature of the produce.

Thank you for your efforts in providing safe food.

Please feel free to contact me if I can be of further assistance.

Sincerely,

Patrick L. Guzzle



University of Idaho
Extension

