

HSSU Bio. 201 Plants and People

Chapter 14 Study Guide: Starchy Staples (Root Crops)

Important Terms and Concepts

Root Crops

Taproot

Fibrous roots

Prop root

Adventitious root

Storage Organs

Stolon

Rhizome

Tuber

Bulb

Corm

Tuberous roots

White potato

Solanum tuberosum

Solanaceae

Andean root crops

Incas

Potato variety in Andes

Chuño

Potato in Europe

Phytophthora infestans

Late blight of potato

Irish Famine 1845

French fries

Potato chips

Seed potatoes

Colorado Potato Beetle

Bt genes

Burbank Russet

Yukon Gold

Sweet Potato

Ipomoea batatas

Convolvulaceae

Morning Glory Family

Tuberous root

Slip

Arawak Indians

Cassava

Manihot esculenta

Euphorbiaceae Family

Manioc

Tapioca

Farinha

Fufu

Casabe bread

Lowland tropics

Sweet Cassava

Bitter Cassava

HCN

Cyanide

Cyanogenic glycosides

True Yams

Dioscorea spp.

Dioscoreaceae Family

Taro

Colocasia esculenta

Araceae

Hawaiian Poi

Corms

Jerusalem Artichoke

Helianthus tuberosus

Asteraceae Family

Inulin, polymer of fructose

Discussion Questions

1. What are various kinds of roots and root-like stems that have been domesticated as root crops. List five major root crops, and where you might expect to find them grown.
2. Where was the potato domesticated, and by whom? Describe the diversity of potatoes in the Andes. What was the cause of the Irish Potato Famine of 1845? What lessons did this famine teach us about the value of genetic diversity?
3. Why characteristics make cassava such an important crop in the tropics? What are some drawbacks to cassava, and how might we get around them?