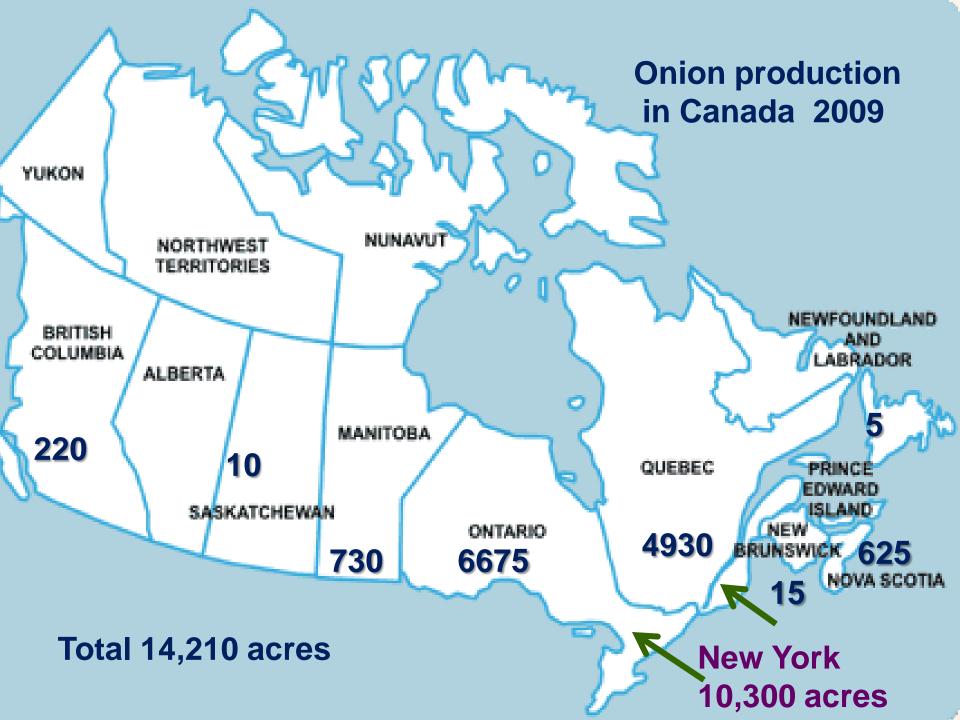




Holland Marsh, Ontario, Canada: 44° 15' N, 79° 35'W Fresno: 36° 45' N, 119° 45' W

- In 2009 there were:
- 14,210 acres
- which produced 242,387 tons
- Worth \$57.9 million





- Long day, yellow bulb onions
- Most are onions grown on muck soils - in Quebec, Ontario and B.C.
- Seeded April early May, harvested Aug. & September





 About 10% of yellow bulb onions in Ontario are grown from plug transplants for the early market.

There is a premium for early, large, cooking

onions





- Spanish onions are generally grown on mineral soil.
 - These are usually grown from transplants
 Small acreage, but

increasing interest in processing for onion rings





Cooking onions are sprayed with maleic hydrazide (MH 30) to prevent sprouting in storage

Pulled, and left in windrows to dry for 2 days- 3 weeks to field cure



Most are also put through artificial curing (80 90 °F for 1 – 3 days) then gradually cooled to 32 °F and stored at 65% relative humidity

These onions can store for 10 -12 months, usually sold within 8 months of harvest

80% of the crop goes into storage and is sold from November- April (seeding new crop, refrigeration costs)





Onion Challenges

- Production-
 - Weed control
 - Onion thrips
 - Downy mildew
 - Onion maggot
 - Onion smut
 - Allium white rot
 - Botrytis leaf blight
 - Bacterial diseases

The Weather!



Iris yellow spot virus

- Found in Ontario in 2007 and 2008
- 2007: 7 of 8 fields in the Holland Marsh tested positive, also in set onions in other parts of the province
- 2008: 2 of 7 fields in the Holland Marsh
- 1 of 3 in Chatham/Kent and Thedford/Grand Bend
- 0 of 1 in Norfolk county
- Both years there was low incidence in the fields and no apparent yield loss resulting from the virus
- No more surveys for IYSV, but no problems have been identified





Irrigation:
Bradford usually
receives 40 inches of
rain a year

Before 1988, very little irrigation of onions, then sprinkler irrigation with solid set pipe

Now travelling low booms Is irrigation needed on onions on muck soil?

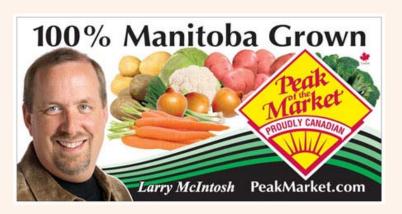




Sometimes we get too much water!

Onion Challenges

- Marketing-
 - Peak of the Market-Manitoba
 - Other brands:
 - Holland Marsh Growers
 - Canadian dollar compared to U.S. dollar
 - Canadian onions are exported to the Caribbean islands, some to eastern U.S.
 - 40 to 60% of Ontario onions are exported during the winter months





Garlic in Canada

In 2009 there were:

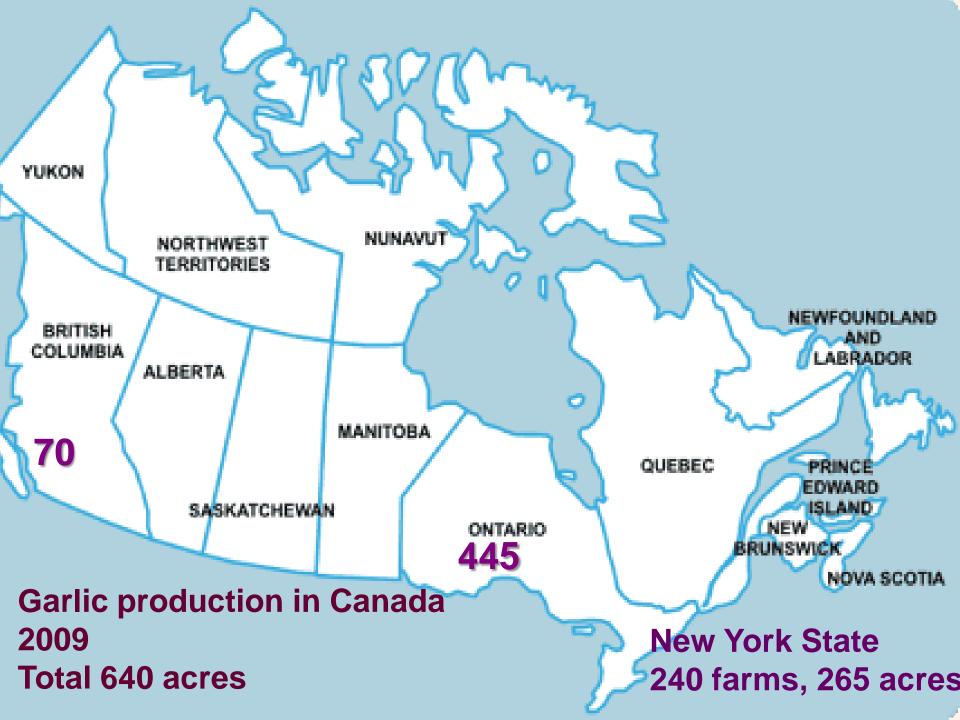
- 640 acres
- which produced 755 tons
- Worth \$3.6 million



Garlic in Canada

- Garlic production is mostly small scale. The largest producer in Ontario has 150 acres.
- Most is sold at farmers' markets and garlic festivals
- Recently, demand has been greater than supply.
- More acres planted in fall 2010





Garlic in Canada

- Garlic is planted in the fall
 - Mid October in Ontario, mid
 September on the prairies
 - Overwinters under the snow
- Harvested the following July or August
- Dried and can be stored for several months



Most is hard neck garlic, the scapes have to be removed, mostly by hand.

There are some markets for scapes "garlic asparagus" or "garlic flowers"





Garlic Challenges:

Clean seed!!

Big problems with bulb and stem nematode



