

Saskatchewan – The Irrigation Environment



Scott Wright SAF

Director – Crop Development

(306) 787-4661



Physical Environment?

- Dry
- Evaporation Exceeds Precipitation
- Periods of Drought
- The worst 99-04
- Most expansive 01-02
- Surface and Ground water
- Agriculture is Water Sensitive.....



The Political Environment

- **Environmental** – functionality
- **Social**
 - the cost of underdevelopment
 - the cost of drought
 - the cost of missed opportunity
- **Economic** – Provincial and Farm
(GDP) (NFI)



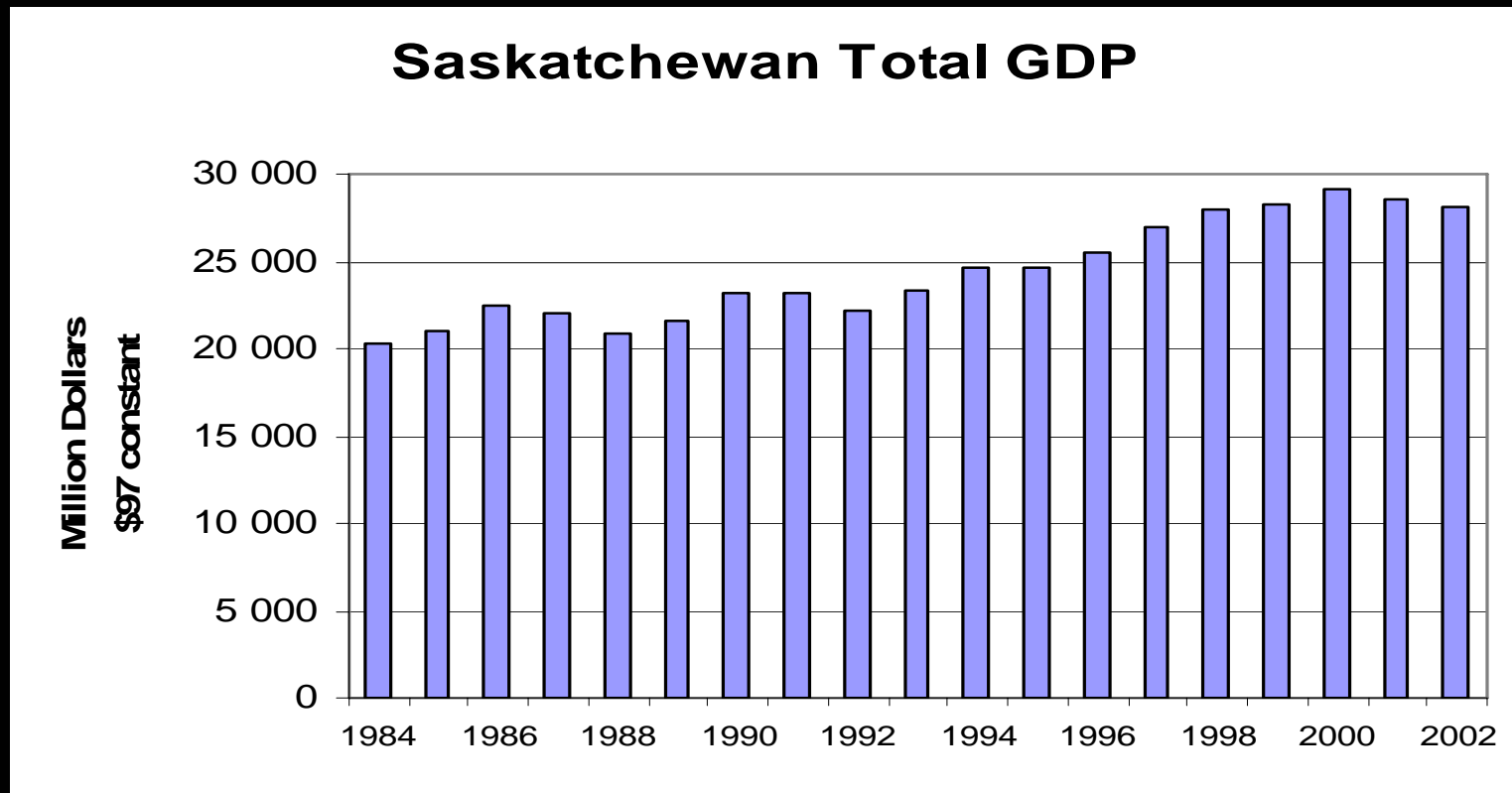
What is GDP ?

- Gross Domestic Product (GDP) is the total money value of all final goods and services produced in an economy over a one-year period.
- It is often used as an indicator of economic well being.



Saskatchewan GDP

- Saskatchewan's GDP has grown at a rate of approximately 1.8% annually



The Saskatchewan Economy

Service Sector
(Construction and Tertiary)
\$20.5 Billion GDP
385,500 Jobs

Resource Sector
\$4.0 Billion GDP
16,000 Jobs

Agriculture
\$2.6 Billion
GDP
51,000 Jobs

Manufacturing
\$2.1 Billion GDP
29,500 Jobs

Agriculture GDP

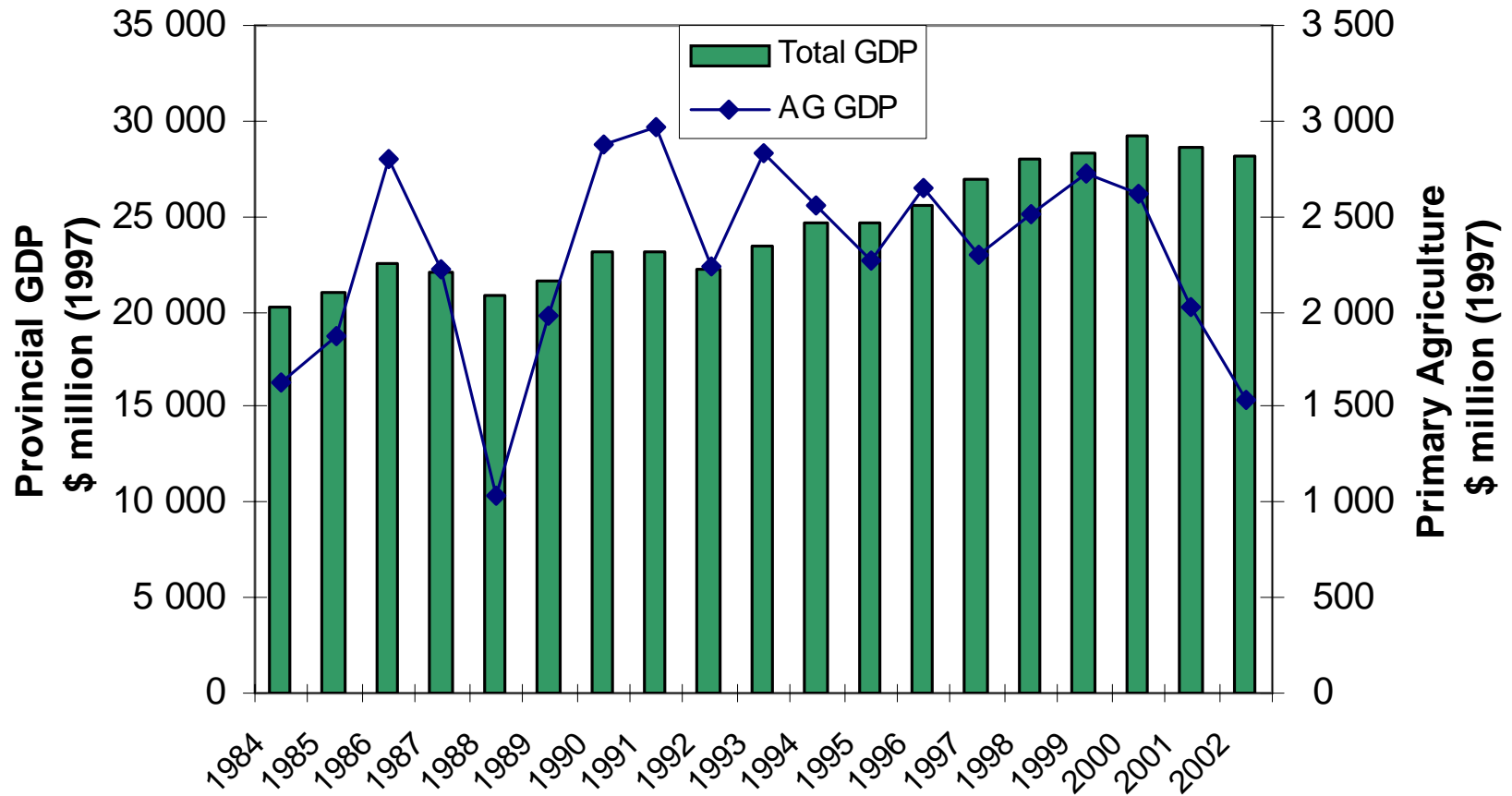
- Saskatchewan has a grain-based agricultural economy.
- The agriculture contribution to GDP includes the output from all farms and other related agriculture value-added industries.
- Agriculture GDP increased from \$1.6 billion in 1984 to averaging ~\$2.6 billion per year.



Agriculture GDP

Saskatchewan GDP

Total Provincial GDP and Primary Agriculture Sector



Increasing Agriculture GDP

■ Irrigation

- Irrigation around Lake Diefenbaker is producing 6 times the dryland GDP/acre.
- \$300/irrigated acre vs. \$50/dryland acre
- What if through increased productivity and using higher value crops on irrigation, we increase GDP per acre by \$100/acre in the LDDA?

Increased GDP

= 90,000 acres x \$100/ac

= \$9 million.



Increasing Agriculture GDP

- What if irrigation was expanded by 1 million acres in Saskatchewan?
 - \$2 billion in investment ?
 - Jobs ?
 - 1 million acres x \$250/ac increased GDP
 - = \$250 million additional GDP*
- Doesn't include productivity gains that can be achieved or growth through higher value crops.
 - **What about Risk Management ??**



The Impact of Prairie Drought ? 2001 & 2002

- Farm Production 1.5B\$ / yr
- 14,000 Jobs/yr
- 2.3B\$ GDP/yr
- Saskatchewan 45%
- Payments exceeded 500% of 10 yr av
- Forest Fires 10X the 10 year average

Wheaton et al. SRC Publication No. 11602-46E03 January 2005



Scientific understanding?

“...may be less solid than expected, and further complicated by climate change factors.”

“...point to the threat if increasing severity and frequency of future droughts”



Water – Saskatchewan's Opportunity

- Significant supply is available!
- Development can't be a dirty word!



Competing Uses

Instream

Waste
Environment
Energy**

Withdrawl

Agriculture
Domestic
Industrial



Irrigation Development in Saskatchewan



Existing Development

● Pivot	⇒ 119,000 acres
● Wheelmove	⇒ 37,000 acres
● Other Sprinkler	⇒ 21,000 acres
● Gravity	⇒ 61,000 acres
● Backflood	⇒ 94,000 acres
● Others	⇒ <u>3,000 acres</u>
Intensive Irrigation	241,000 acres
Approx. Total	335,000 acres



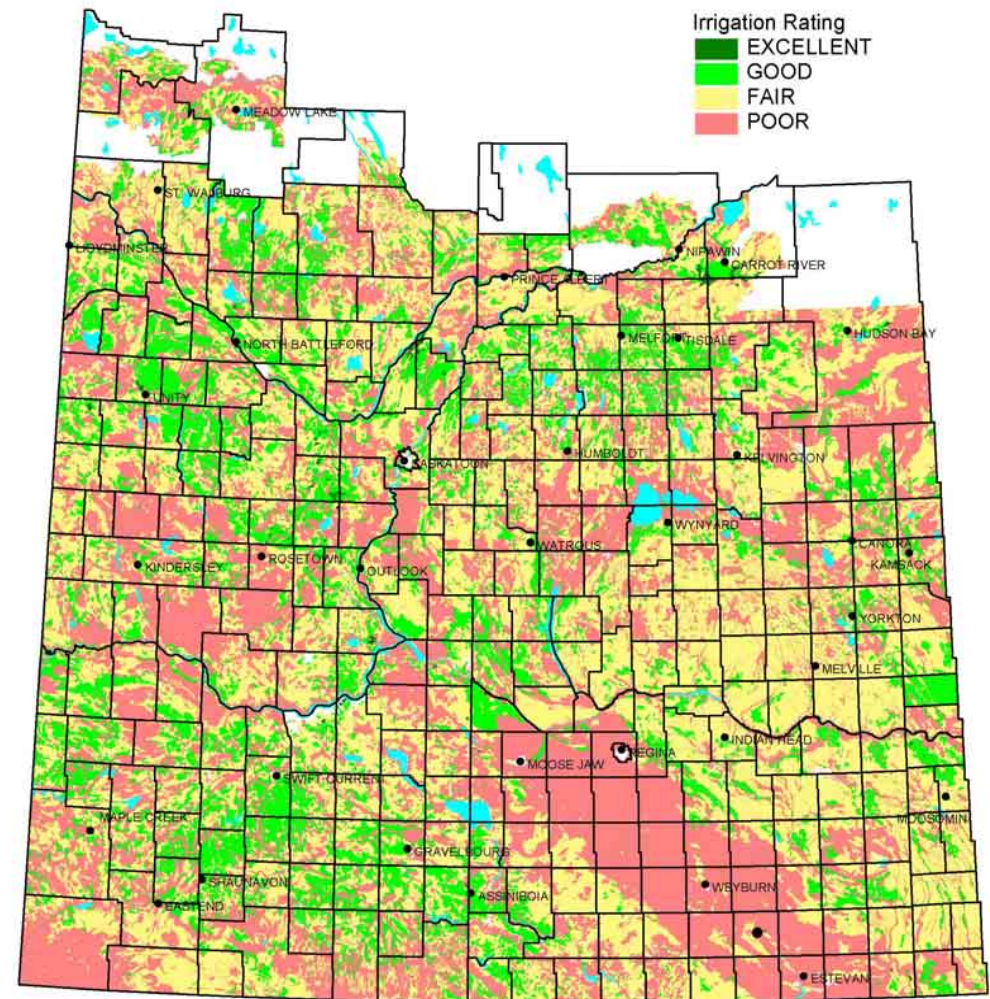
SOIL AND LANDSCAPE IRRIGATION SUITABILITY

Excellent =
127,096 acres

Good =
12,210,726 acres

Fair =
31,782,375

Poor =
28,830,808



GROWTH

GDP / Jobs

Retained Value

Value Chains

Multiple Profit Points

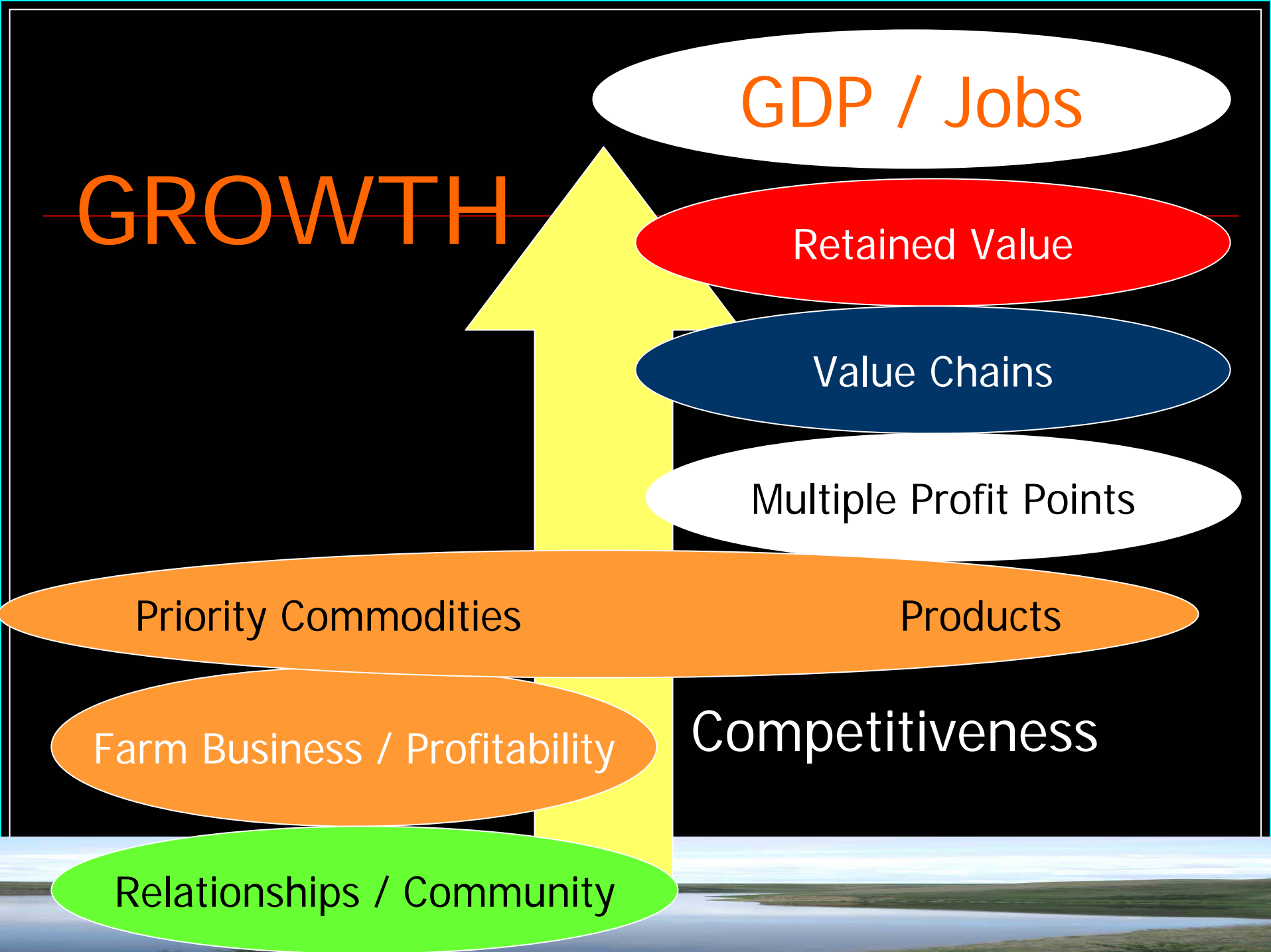
Priority Commodities

Products

Farm Business / Profitability

Competitiveness

Relationships / Community



What does it look like today...

- Redefine irrigation drivers
- Public good
- Privately partnered – Districts
- SAF organizational change
- Development starts with infill
- Link expansion more closely to Agri-Value
- Federal Partnerships for significant development



Challenges

There is current capacity
There is urgency

- Long term View
- Short term investment
- Meeting the needs
 - Fed-Prov
 - Prov-Regional
 - Prov Depts (SAF, SWA, IR, Hydro, H&T)
 - Industry and Irrigators



Challenges – places to focus

- Public understanding – coordinated policy
- Compelling future vision – value of water
- Economic * Environmental * Social
balance
- Agricultural impact - sustainability
- Climatic Reality?



