

加拿大农业保险发展及其经验

—以马尼托巴省为例

Development and Experience of Crop Insurance
in Canada—Case of Manitoba Province

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一、历史回顾Historical Perspective

- 上世纪20年开始，加拿大已经开始关注和研究农作物保险。（**Crop insurance in Canada has been studied and development since the 1920's.**）
 - 在上世纪30年代的大面积干旱发生时期，对整个西部草原受灾农作物损失补偿的实地调研和建议大量出现。（**A number of investigations and proposals for crop—loss protection sprang during the droughts of the 1930s**）
 - 1938年，随着美国联邦农作物保险项目的实施，在加拿大，如何对农业损失进行补偿的问题又一次得到关注。（**Interest in crop-loss protection was further heightened in 1938**）
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PFAA 的失败 (The Fail of PFAA)

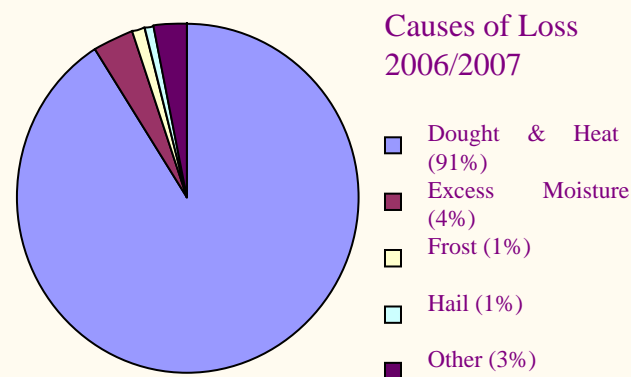
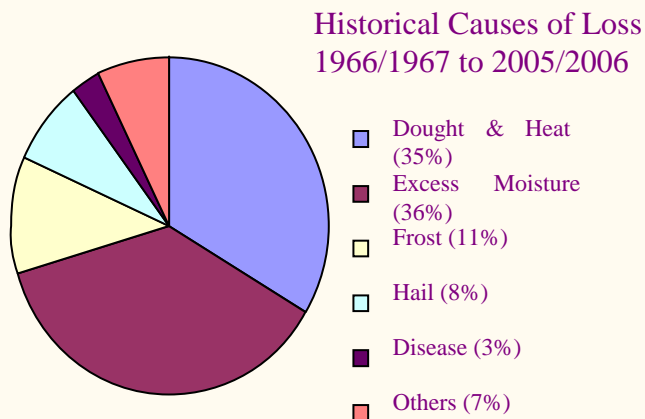
- **1939年，加拿大联邦政府开始实施第一个对农作物损失进行补偿的项目--PFAA。（Prairie Farm Assistance Act--PFAA）**
 - **PFAA存在的不足（Shortage of PFAA）**
 - **1.Payment under PFAA was not large enough to compensate against all losses**
 - **2.It did not cover all the operating or living expenses associated with a crop loss.**
 - **3.All farmers in an area received the same payment regardless of individual yields or losses.**
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1959年作物保险法--Crop Insurance Act(CIA)

- 促进各省开展作物保险
 - 联邦政府被授权参与各省的作物保险计划的制定
 - 这个法案并不是一个专门的保险法，而只是授权联邦政府直接资助各省的农业保险项目
 - 第一个实施农业保险的省是马尼托巴（1960年），到1975年，加拿大10个省全部开展了农业保险。
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二、马尼托巴农业保险实施现状 (A Brief Introduction of Agricultural Insurance in Manitoba)

□ 1. 马尼托巴省的主要自然灾害(Causes of Loss in Manitoba)



2. 提供农业保险服务的范围 (Manitoba program Scale 2007)

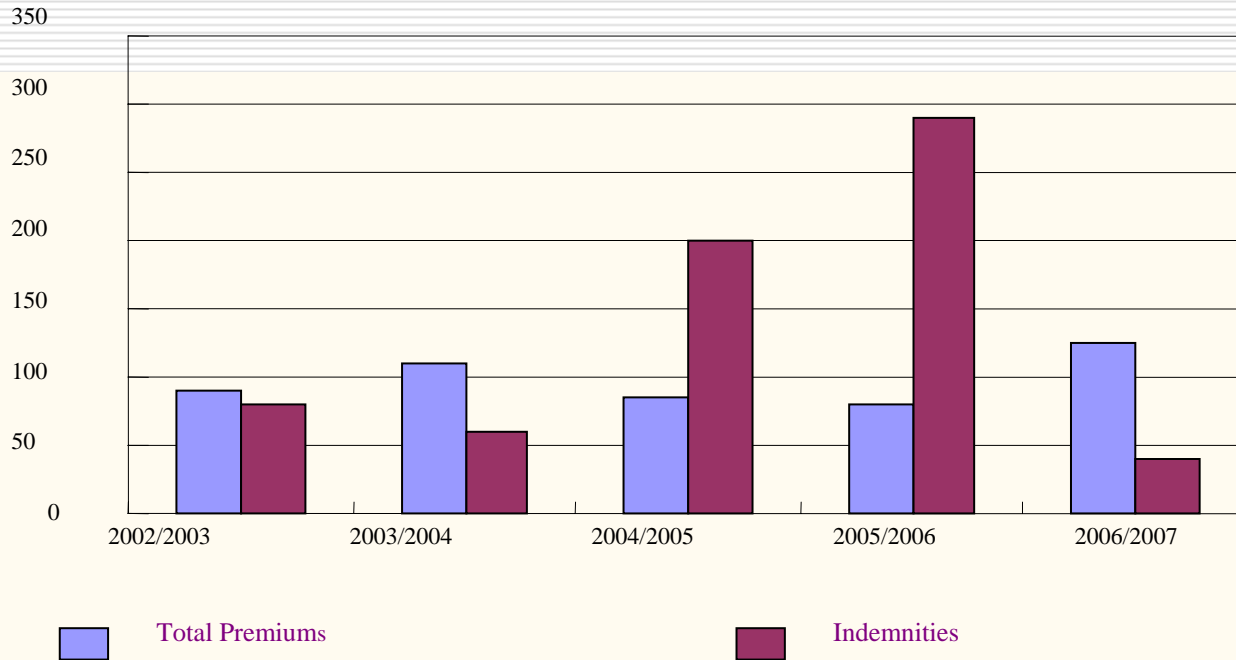
- ❑ 参保作物：60多种作物(Insured 60 Crop Types)
 - ❑ 签订参保合同：10500份(Insured 10500 Contracts)
 - ❑ 参保面积：九百一十万亩 (Insured 9.1 Million Acres)
 - ❑ ——该省作物总面积的90%参保 (90% of all annual crop acres)
 - ❑ ——饲草、饲料种植面积35%参保 (35% of all hay and pasture acres)
 - ❑ 总农业保险承保额：10.3亿加拿大元 (Total production Insurance Liability-\$1.3 billion)
 - ❑ 理赔：7500件 (7500 Claim)
 - ❑ 平均承保率75.4% (Average Coverage Level 75.4%)
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3.2007年马省农业生产保险收益

	百万加元 (\$million)
保费收入 (Premium)	1 5 1
利息收入 (Interest)	8
赔偿费 (Indemnities)	70
再保险费 (Reinsurance)	24
收入 (Income)	65
节余 (Ending Surplus)	224

农业保险保费收入与赔偿费支出

□ PRODUCTION INSURANCE TOTAL PREMIUMS AND INDEMNITIES (\$MILLIONS)



3. 农作物保险费用构成 (Shared Funding)

- 生产者、联邦政府和省政府三方分担制 (Tripartite arrangement)

	Producers	Manitoba	Canada
High risk Coverage	67%	13%	20%
Comprehensive Coverage	40%	24%	36%
Catostrophic Loaaes	--	40%	60%
Administration	--	40%	60%

4. 农业保险公司（政府机构） The Insurance Business –Offices

- ❑ Head Office located in Portage La Prairie
 - ❑ --Approximately 60 staff
 - ❑ 19 agency offices strategically located throughout rural Manitoba
 - ❑ --Approximately 38 staff
 - ❑ Adjusting staff, mainly part time
 - ❑ --Approximately 150 staff-based out of agencies
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政府保险机构的职责(Fundamentals)

- ❑ Establish probable(i.e. expected) yield
 - ❑ Establish coverage (% of probable yield)
 - ❑ Establish expected losses(premium)
 - ❑ Determine actual production
 - ❑ Determine production loss (coverage – actual production)
 - ❑ Apply an insured dollar value to convert premium and loss from bushels into dollars
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产量测定 (Probable Yield)

- Probable Yields are calculated for each crop and risk area
 - using 10 years of yield data
 - The risk area Probable Yield is then adjusted to reflect soil type:
 - each quarter section(160ac.) is rated from A to J
 - soil zone probable yields cannot change by more than 5% per year.
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承保水平(Coverage Levels)

- Coverage levels of 50%, 70%, and 80% of an individual's Probable Yield are offered
For example, a producer on C5 land, with 80% coverage and an IPI of 110, would have red spring wheat coverage of:
$$38.9\text{bu} * 110\% * 80\% = 34.2\text{bu/acre}$$
 - If harvested production (adjusted for quality) falls below 34.2 bu/acre, a claim is paid equal to the shortfall.
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保费确定(Premium Determination)

- --Premiums are determined by crop and by risk area
 - --The base premium rate is a 25 year average of loss experience
 - --Additional load are added to reflect changes to program benefits over time, uncertainty, the overall financial self-sustainability of the program, and net premium discounts.
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管理与控制

1、通过文件

□ Common forms & Documents

--Application –by March 31

--Crop management History—with Confirmation—Jan

--Confirmation of Insurance—Statement of Insurance coverage for coming year-Jan

--Seeded Acreage Report—Crop date of seeding, location & acreage—June 30

--Harvested Production Report—Declaration of harvested yields & management practices—Nov 30.

2、项目设计(Program Design)

□ 避免道德风险 (Moral hazard)

应用免赔原则

保险单价低于市场价格

尽量分散风险 (例如按区域承保)

监督管理活动

理赔审核

□ 避免逆向选择(Adverse Selection)

通过补贴保费而扩大参与率

按照不同土壤类型估计产出, 并与个体的经营行为相结合

按照个体的损失经历调整保费

三、一个完善的农作物保险项目的前提条件 (Prerequisites for a Sound Program)

- 第一：以一般风险管理理论的基本原则为基础 (A sound crop insurance program relate to the general theory of risk management)
 - 第二：需要有一系列扎实的与风险相关的实证分析 (The need for solid empirical evidence relating to the conceptual foundation of the program)
 - 第三：高效的项目管理，包括每个农户数据库的建立，损失的测定及原因的确定等 (Administrative aspects of the program covers a wide range of activities)
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四、农业保险项目中几个关键的实证问题（Some of the more significant empirical questions）

- ❑ 作物产量数据的分布特性（Nature of the distribution of the crop yield data）
 - ❑ 技术及其它影响产量因素的变化对正态分布的假设产生何种影响（To what extent do technological and other trend yield factors distort the assumption of normality?）
 - ❑ 如何对土壤及其它微观气候因素进行归类（How are soils and other micro climatic factors to be categorized and classified）
 - ❑ 作为产量估计和保费确定的基期多长是恰当的，5年还是20年？（What base period (5years?20years?)is appropriate as the basis for the establishment of crop yields and associated premiums）
 - ❑ 哪类数据应该包含在基本数据中？在对一个项目进行精算时如何应用这些数据？（What types of biases are contained in the data? How can they be handled in establishing a valid actuarial base for the program?）
 - ❑ 怎样建立一个应对复杂自然灾害的统计数据，或者还是应该按照不同的灾害进行精算？
 - ❑ 有可能建立一个能够适应不同作物的保险项目吗？还是要针对不同的作物建立不同的保险项目。
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五、经验总结（Lessons Learned from Experience）

- ❑ 农作物保险不能解决价格波动、成本、收入变化等问题，它只适应于产量的变化。
 - ❑ 农作物保险项目必须以坚实的理论和恰当的实证分析为基础。
 - ❑ 农作物保险项目的作用已经超越了参与保险的生产者本身，而且也还与农业生产、加工相关的其他领域产生影响，例如，对化肥及机械供应者、农村信贷及农村社区等都会产生很大影响。
 - ❑ 农作物保险是从事农业生产经营所必不可少的部分，特别是目前农户对天气等自然因素无法控制的状况下，农作物保险是农户风险管理的重要手段。
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谢谢大家!

Thanks!
