

Risks

Outcomes

King Family Ranch

Decisions

RightRisk™

Ag Survivor: The King Family Ranch

- Mountain valley ranch in the Rocky Mountain West.
 - 500 cows
 - » 400 calves sold each year, typically
 - 350 acres of hay
 - \$51,996 of expected profits
 - » Revenues = \$247,996.50
 - » Expenses = \$196,000.00



RightRisk Risk Example King Family Ranch

Risk Scenario: Normal Winter

- 67% probability
- Hay prices go down \$10/ton
- No increase in feed usage (825 ton)
- No change in expected weaning percentage



RightRisk Risk Example King Family Ranch

Risk Scenario: Severe Winter

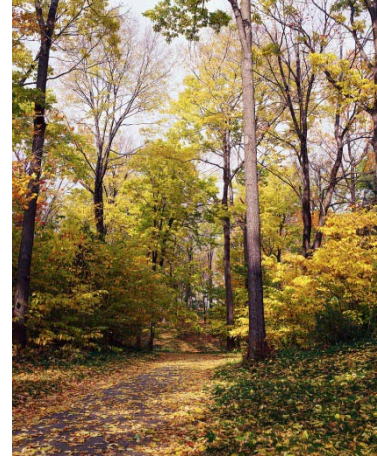
- 17% probability
- Hay prices go up \$15/ton
- Increases feed usage 100 tons (925 tons)
- Weaning percentage
 - - 3.0% if no required hay purchase
 - - 3.4% if required to purchase 50 tons or less
 - - 4.2% if required to purchase more the 50



RightRisk Risk Example King Family Ranch

Risk Scenario: Milder Than Normal Winter

- 17% probability
- Hay prices go down \$20/ton
- A 50 ton decrease in feed usage (775 ton)
- No change in expected weaning percentage



Example: Hay Storage

		Actions		
		Buy Hay	None	Sell Hay
Winter				

**RightRisk Payoff
Matrix Exercise**

**Which would
you choose?**

Example: Hay Storage

Winter	Prob.	Actions		
		Buy Hay	None	Sell Hay
Severe	1/6	\$36,159	\$34,365	\$31,524
Normal	4/6	\$50,997	\$51,497	\$51,997
Mild	1/6	\$52,997	\$53,997	\$54,997

Example: Hay Storage

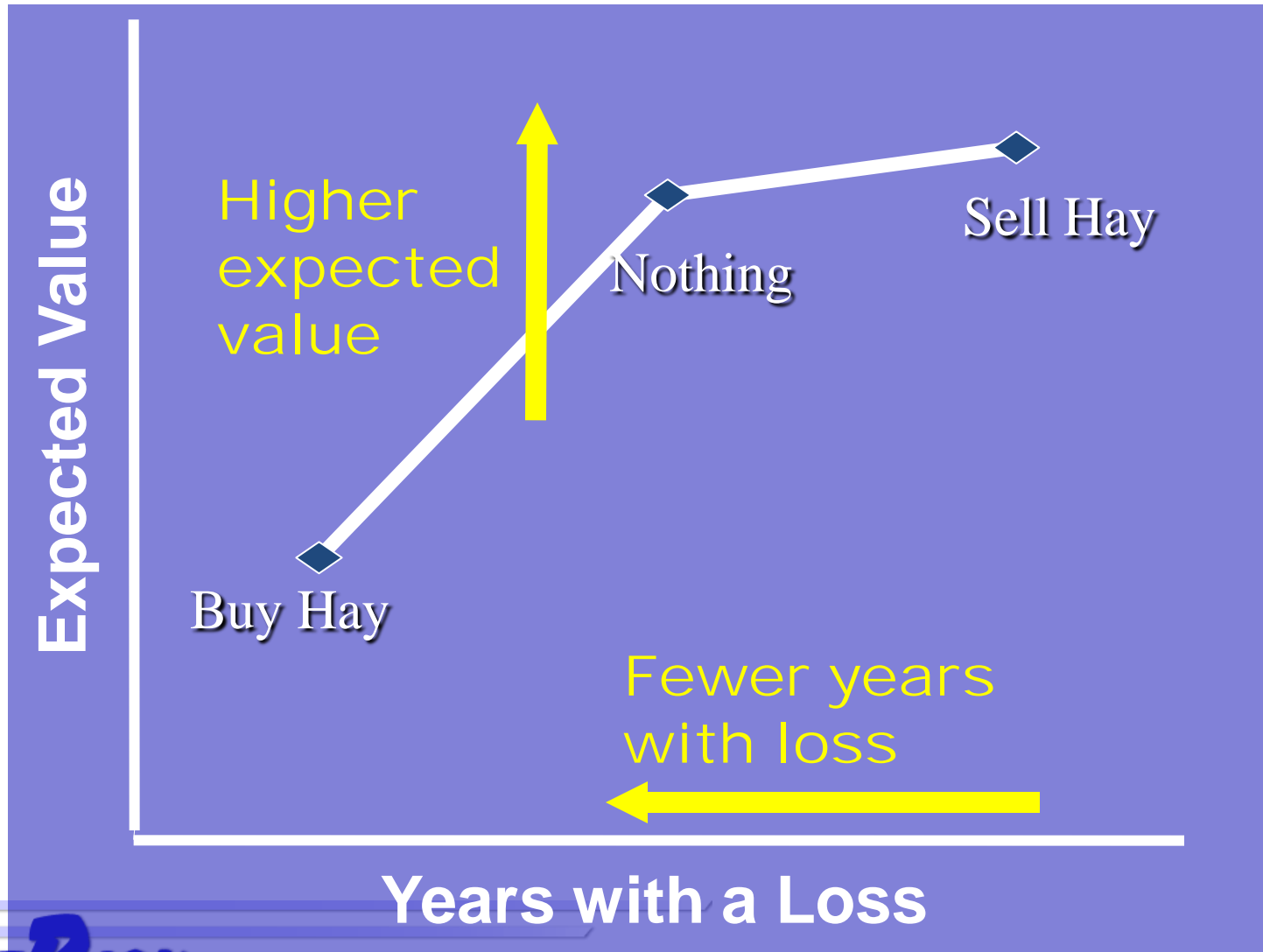
		Actions		
Winter	P	Maximize Expected Value		Sell Hay
	Severe			\$31,524
	Normal	4/6	\$50,997	\$51,997
	Mild	1/6	\$52,997	\$54,997
	Exp. Value		\$48,857	\$49,058

Example: Hay Storage

Winter	Prob.	Expected Value	Min. Value	Max. Value
Severe	1/6	\$36,159	\$34,365	\$31,524
Normal	4/6	\$50,997	\$51,497	\$51,997
Mild	1/6	\$52,997	\$53,997	\$54,997
Min. Value		\$36,159	\$34,365	\$31,524

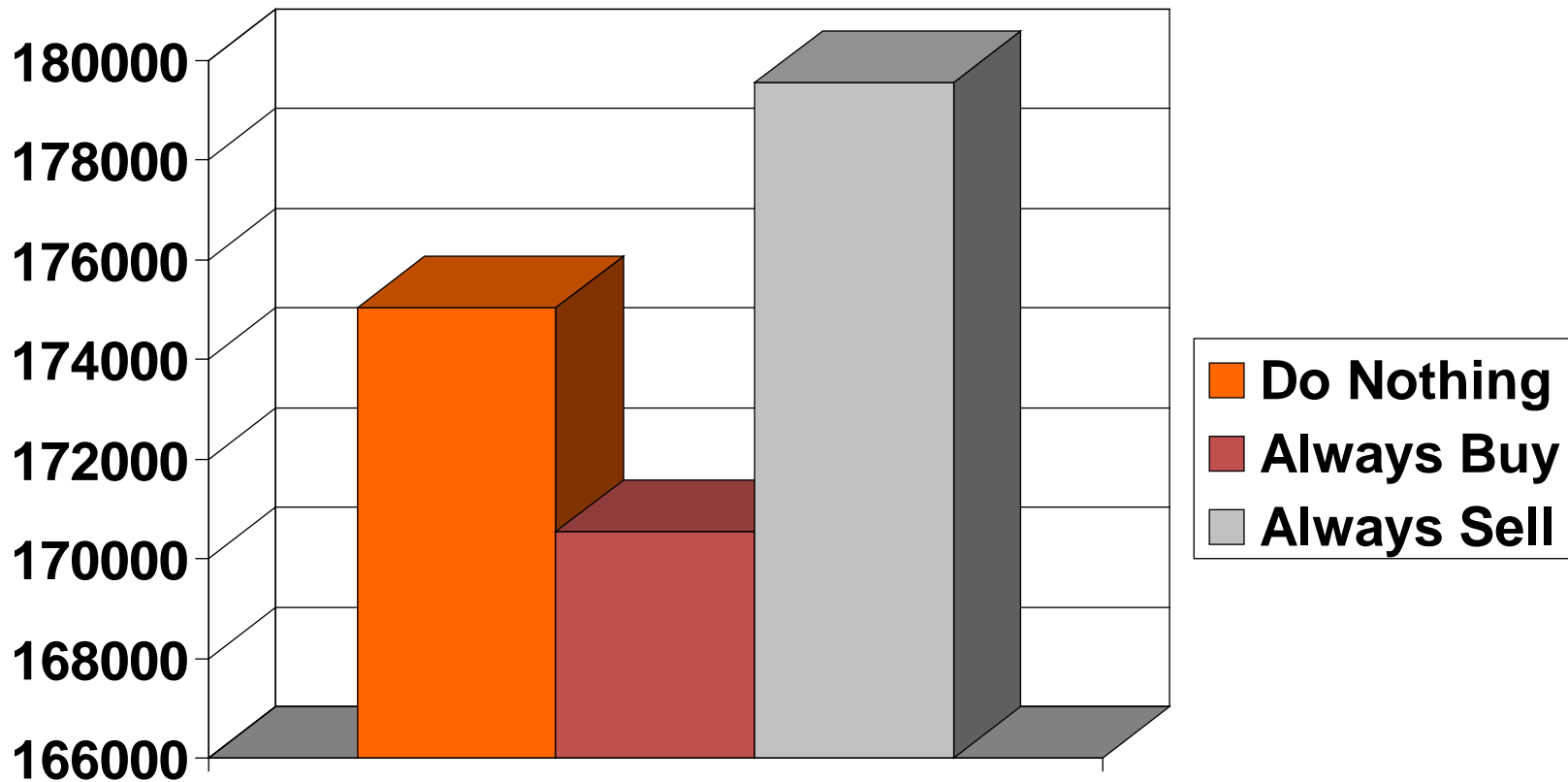
**Maximize
Minimum Value**

Example: Hay Storage



RightRisk Results

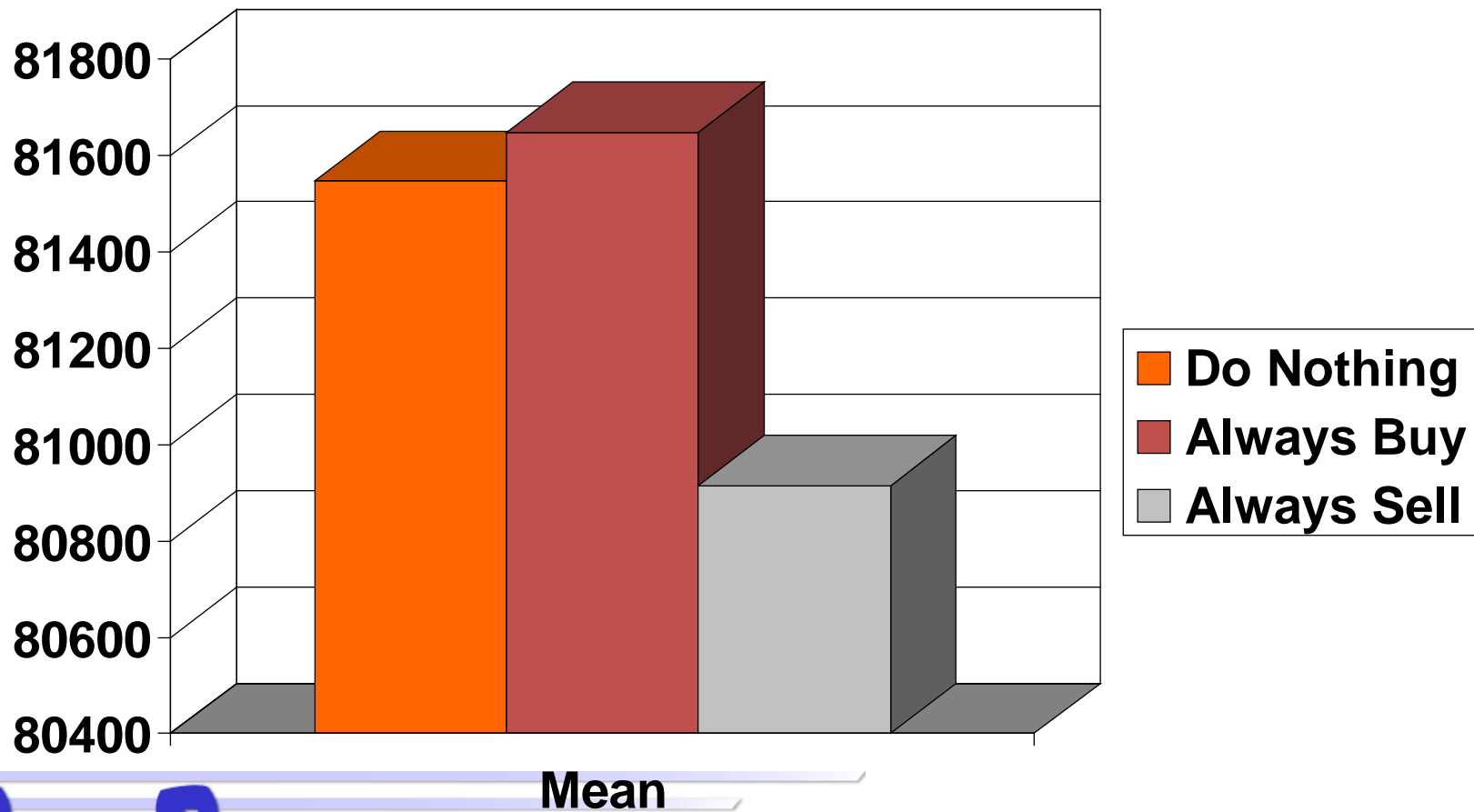
Profit Distribution From 100 Repeated Plays



Maximum Returns

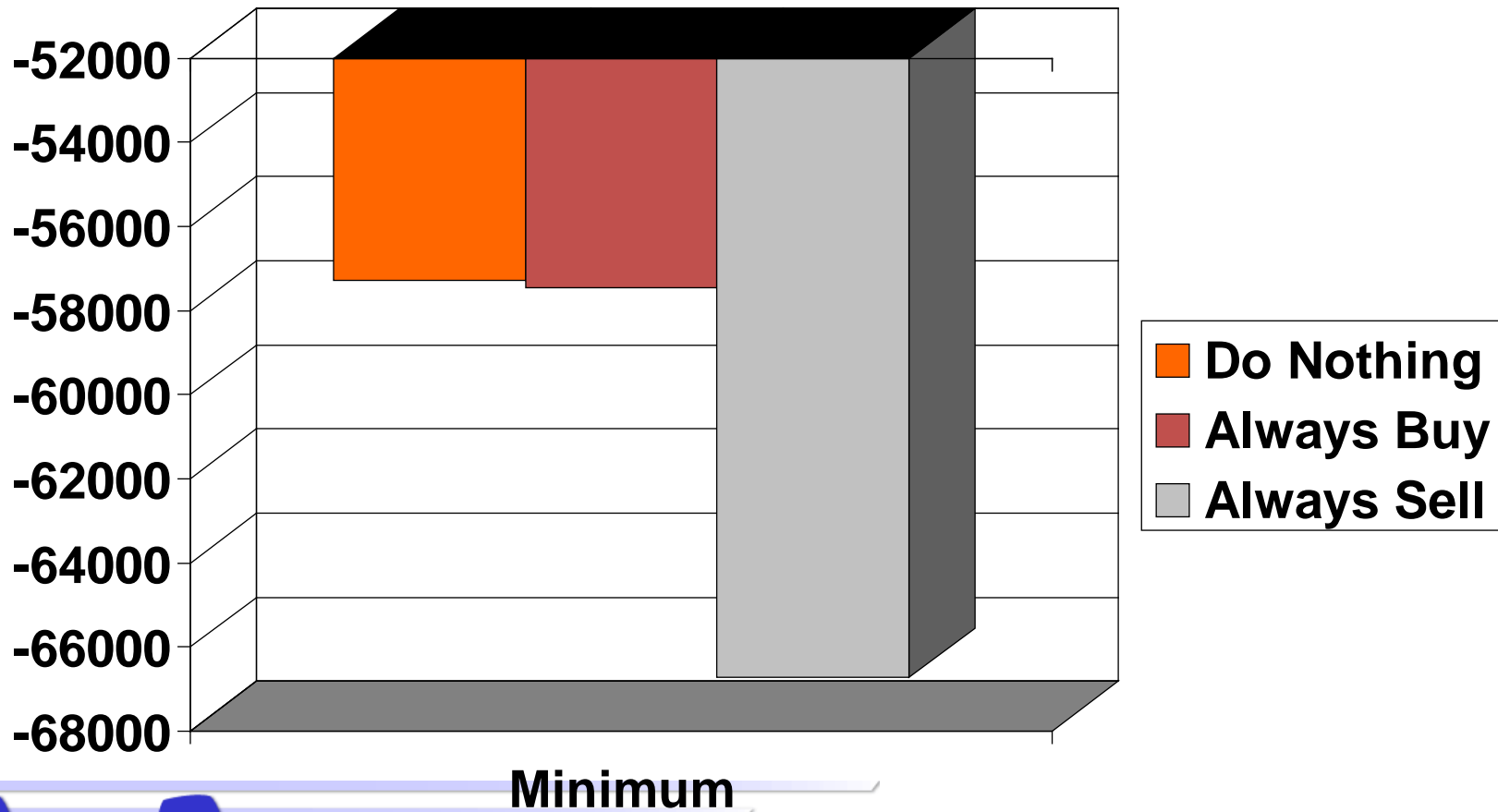
RightRisk Results

Profit Distribution From 100 Repeated Plays



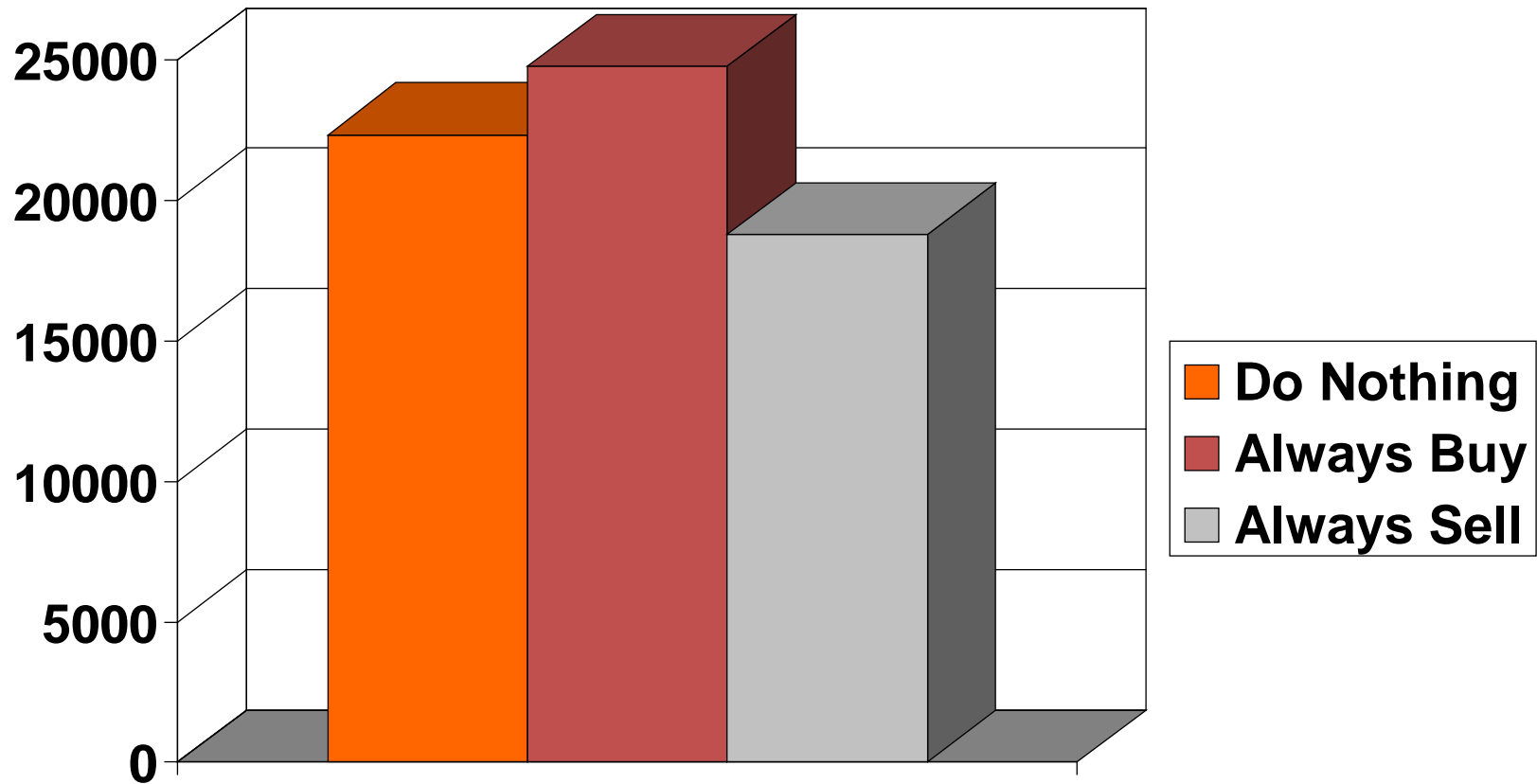
RightRisk Results

Profit Distribution From 100 Repeated Plays



RightRisk Results

Profit Distribution From 100 Repeated Plays



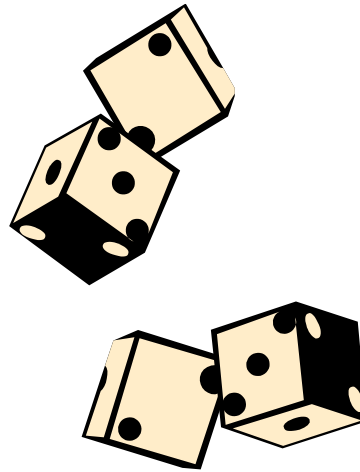
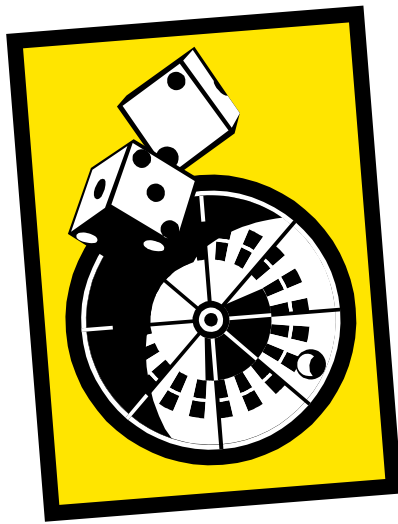
10th Percentile

Risk Assessment Summary

- Appropriate decisions must consider
 - Sources of risk
 - Risk probabilities
 - Possible outcomes
 - Risk preferences

RightRisk *Ag Survivor*

Provides an opportunity to practice risk management without the *real world* consequences



RIGHTRISK™