Effects of Immigration Policy Changes on Farm Labor Risk Management: Predictions using a Decision-making Software for Growers

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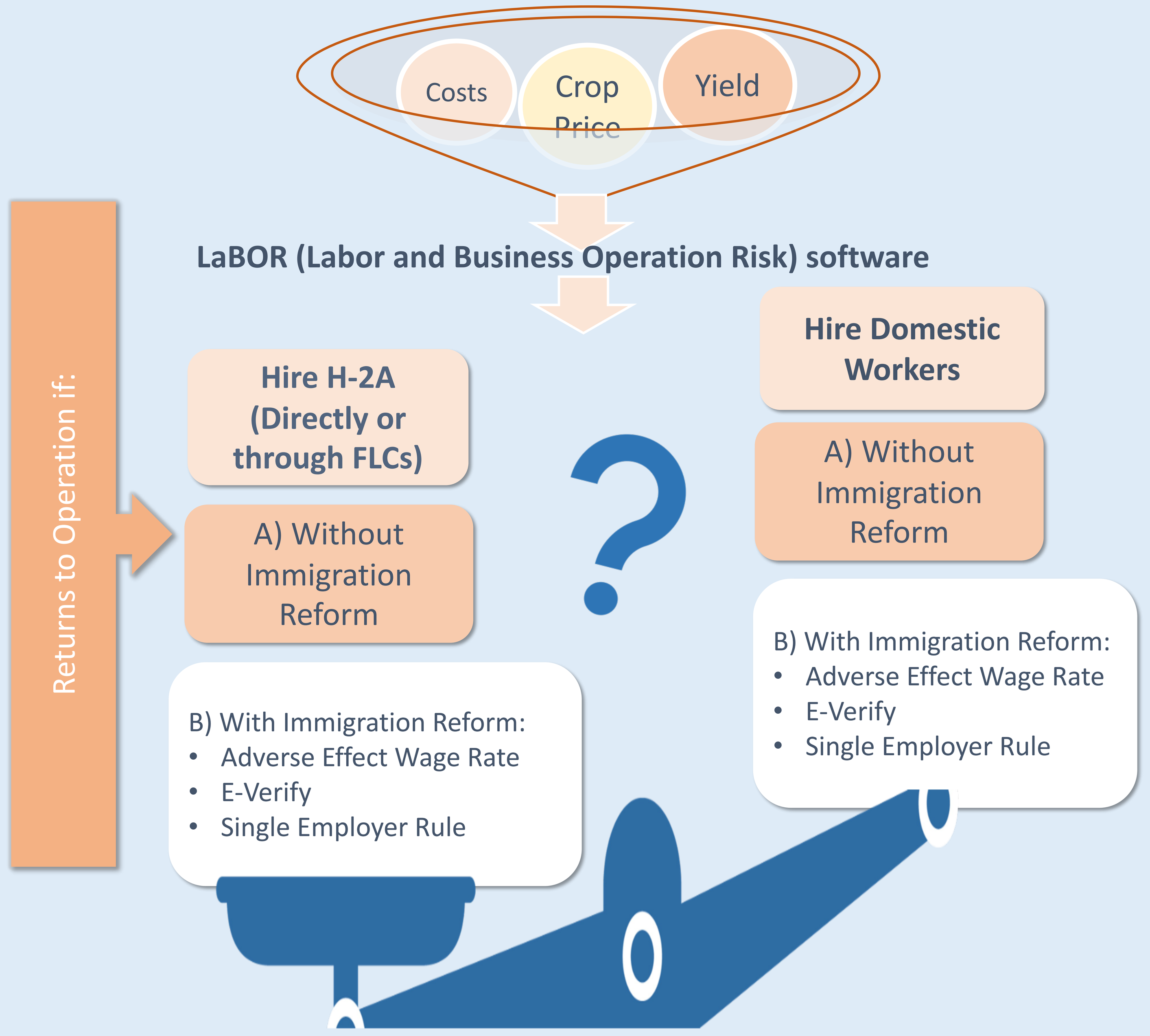
1. Introduction

- U.S. agriculture relies heavily on immigrant labor, which constitutes about 70% of the farm workforce (USDA-ERS, 2023).
- Labor shortages persist due to a diminishing domestic labor supply and stringent immigration laws.
- The H-2A Temporary Agricultural Workers visa program is increasingly utilized to help meet labor demand but use of the program faces high costs and bureaucratic complexities.
- Small and medium-sized farms are particularly vulnerable to labor availability uncertainty.
- Labor and Business Operation Risk (LaBOR) software aims to help growers assess the profitability of employing H-2A versus domestic workers.



2. Objective

- Develop a robust decision-making tool that enables growers to navigate the complexities of labor risk management under the changing immigration environment.

3. Labor and Business Operation Risk (LaBOR) software Methodology

- The LaBOR software allows employers/users enter their operational data privately. *It* computes the Net Present Value (NPV) for a firm using a 15-year investment horizon, under different labor force hiring options: option 1 is hiring domestic workers, option 2a is hiring H-2A workers directly by growers, and option 2b is hiring H-2A workers through Farm Labor Contractors (FLCs).
- For each option, the software returns the annual future Free Cash Flows (FCF) and discounts them to calculate NPVs based on the following equations:

$$FCF_{ts} = Revenue_{ts} - Labor\ cost_{ts} - other\ cost_{ts} - CapEx_{ts} - CWC_{ts}$$

where FCF_{ts} is the free cash flow in year t for employment option s (s=1 for hiring domestic workers; s=2 for hiring H-2A workers directly; and s=3 for hiring H-2A workers through FLCs), *Labor cost* ($) varies depends on labor force hiring option, and includes wages, pre-employment costs including filing fees, advertising, surety bonds, travel cost, and housing, *CapEx* is capital expenditures ($), *CWC* is changes in working capital ($).

$$NPV_s = \sum_{t=1}^{n} \frac{FCF_{ts}}{(1+r)^t}$$

where NPV_s is net present value ($) of the labor force hiring option s, r is discount rate, n is number of period which is 15 years.

- The following H-2A components will alter the calculation of FCF and NPV by changing cost, revenue and uncertainty.

Components of the H-2A program

01 Single Employer

Single Employer rule binds an H-2A worker to the petitioning employer. Relaxing it could increase uncertainty of labor supply and variation in yield.

02 Adverse Effect Wage Rate

Employers must pay the highest of the federal or state minimum wage, or the Adverse Effect Wage Rate (AEWR). This affects variable labor costs.

03 Three-quarters Guarantee

Employers must guarantee at least 75% of the workdays promised in a contract period. It could alter labor costs under unforeseen circumstances.

04 Housing

Employers must provide housing at no cost to the H-2A worker. This affects pre-employment costs.

05 Transportation

Employers must provide H-2A workers with free transportation for international round trips and daily commutes. This rule affects pre-employment and variable labor costs.

06 60-minute Rule

H-2A worker must live within an hour's drive from their job site. This requirement only applies to FLC employers. It could affect pre-employment and variable labor costs.

07 Recruitment of U.S. Workers

Businesses must demonstrate that no U.S. workers are available, and ensure that U.S. workers' conditions are at least as favorable as those provided to H-2A workers. This affects pre-employment and variable labor costs.

08 Application Costs

H-2A employers cover petition and application fees as well as recruitment expenses. This affects pre-employment costs.

4. Examples of scenarios that influence farm labor hiring decisions

- In states like California and Washington, farmworkers receive **overtime pay** after 40 hours per week. Adopting similar regulations in other states could raise labor costs (see Item 1 in Table below).
- The Farm Workforce Modernization Act (FWMA) 2023 is a comprehensive immigration reform bill that includes changes to the H-2A program. The table below (items 2-4) shows how these changes could affect farm revenue, costs, and production uncertainty under different potential policy changes.
    - **Caps on Annual AEWR Changes**: Beginning in 2025, the AEWR can only vary within 1.5 percent lower or 3.25 percent higher than the previous year's rate. It offer wage stability and predictability, reducing labor costs and enabling better labor forecasting to minimize production delays and losses.
    - **Mandatory E-Verify**: Ensures all farmworkers are legally authorized to work, which may cause labor shortages if farms rely solely on domestic (mostly undocumented) workers.
    - **Portable H-2A Visas**: Allow H-2A workers to move freely among other H-2A employers. This could lead to higher labor costs due to increased wage competition and the need for additional incentives for retention. Yield volatility may also increase due to less-predictable labor pool.

Hypothetic scenarios	Hire domestic workers		Hire H-2A workers directly		Hire H-2A workers by FLCs	
	Cost	Uncertainty	Cost	Uncertainty	Cost	Uncertainty
1. Employers are required to pay workers for overtime	↑	—	↑	—	↑	—
2. Caps on annual AEWR changes	No direct impact		↓	↓	↓	↓
3. Mandatory E-Verify for farmworkers	↑	↑	No direct impact		No direct impact	
4. Portable H-2A Visa, allowing worker movement among H-2A employers	No direct impact		↑	↑	↑	↑

Note: The H-2A program imposes penalties of up to $6,386 per violation, with additional fines for housing or transportation issues. It is crucial for employers to consider these compliance risks when making employment decisions.

5. Conclusions

- Due to the complexity of H-2A policies and real-life challenges faced by farmers, the proposed LaBOR software could serve as a decision aid for extension agents and employers, especially for small and medium-sized operations.
- LaBOR software evaluates the impact of H-2A rule changes on farm operator decisions, helping them choose between domestic and H-2A workers based on altered Net Present Value. It enhances strategic planning for U.S. farms, ensuring adaptability to labor market volatility and policy reforms.

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Reference: USDA Economic Research Service, 2023, Farm Labor, https://www.ers.usda.gov/topics/farm-economy/farm-labor/

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