



# System Dynamics Group Seminar Series

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### Dealer Hoarding, Sales Push and Seed Returns: On the Interdependency between Incentives and Salesforce Management

Tuesday, May 23<sup>rd</sup>

Presentation and Lunch: 12:00-1:30pm, E62-650\*

**Abstract:** Many industries struggle with the high intensity and high cost of product returns. To limit the level of returns, the literature on supplier incentives advises proper sales targets and salesforce incentives; and, the literature on retailer incentives proposes the use of rebates and penalty contracts. However, high levels of returns persist in industries that adopt such prescriptions. To shed light on the cause and persistence of returns, we describe a case-based field study of the hybrid seed industry. We develop a formal dynamic model of the interaction of sales effort allocation and dealer hoarding behavior to understand the dynamics of corn seed returns. We explore the dynamics of returns in the supplier-buyer system through a series of experiments (e.g., sales force size, aggressiveness of sales quotas, and intensity of buyer incentives). Our analysis suggests that a key factor contributing to excessive seed returns is the unplanned allocation of sales resources to meet revenue quotas late in the sales cycle. In particular, we find that: (1) managerial pressure and sales representatives' efforts to meet quotas coupled with dealer hoarding of scarce products can lead to high return rates, (2) this mechanism is self-reinforcing when examined across multiple seasons, and (3) this vicious dynamic can be provoked by temporary increases in demand. Product returns persist because proper retailer incentives solve the dealer hoarding problem, but sales targets exacerbate the inadequate allocation of effort by salespeople. Overly-aggressive sales targets and limited resources increase the pressure faced by salespeople, leading to inadequate sales efforts and to higher seed returns. By understanding the causes of seed returns, this research informs the limitations of dealer incentives and sheds light on the important roles of managing sales resources and setting adequate sales targets.

**\*Please note the date and room for this seminar**

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