Market analysis



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# The Coordination Market

**A market analysis of local perishable food supply and the case for infrastructure over intermediation**

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## Thesis

The binding constraint on local food is not consumer demand and not farm capability. It is coordination cost, and coordination cost behaves like a fixed cost. It falls hardest on the smallest participants, it does not decline with the volume of a single farm, and it is largely invisible in the price of the product it burdens.

The market has responded to this constraint sensibly and repeatedly. Food hubs, cooperatives, aggregators, year-round retail nodes, subscription programs, shared processing facilities, and produce auctions are all mechanisms for absorbing coordination cost into an organization that specializes in bearing it. These models work. Northeast Ohio has an unusually dense population of them, and several are operating profitably.

But absorbing a cost is not the same as removing it. Every intermediation model must fund the coordination function it performs, and it funds that function from margin drawn out of the same gap that made local supply uncompetitive to begin with. That is why the category tends toward thin margins rather than compounding returns, and why roughly a third of food hubs nationally do not clear break-even. The ceiling is structural, not managerial.

This analysis argues that the remaining opportunity is not another intermediary. It is the layer beneath them. Northeast Ohio already has the aggregation, processing, retail, and price-discovery functions a regional food economy needs. What it does not have is interoperability among those functions. Each node runs its own stack, holds its own inventory picture, and reconciles with its neighbors by phone, spreadsheet, and email. The region has built the organizations and skipped the substrate.

The strategic posture that follows is specific. Compete as infrastructure rather than as intermediary. Earn the integration position by being the operator's software vendor first, at a price that displaces an existing bill rather than adding one. Publish the coordination grammar rather than owning it, because a coordination layer that becomes a rent-taking control point reproduces the concentration it was built to relieve. Fund the work through services and reference implementation quality rather than through a cut of the transactions it makes possible.

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# Market Realities

Any analysis of this market has to begin by discarding three comfortable assumptions. Each is widely held, each is partly true, and each will mislead a strategy built on it.

## The market is small, and the growth is in the unglamorous channels

USDA's Local Food Marketing Practices Survey put direct farm sales of local edible food commodities at approximately nine billion dollars in 2020. Earlier ERS reporting placed local edible farm product sales at roughly 11.8 billion dollars in 2017, which was about three percent of all agricultural sales that year. Local food is a real market. It is not, by share, a large one.

More useful than the total is the channel mix. In the 2020 survey, institutions and intermediaries accounted for roughly 46 percent of direct sales while direct-to-consumer accounted for roughly 33 percent. The romantic channel is the smaller one. Growth in local food depends disproportionately on buyers who require consistent ordering, reliable invoicing, documented food safety,

predictable availability, and service levels that a farmers market stall never has to produce.

This matters strategically because it inverts the intuitive targeting. The participants who most need coordination infrastructure are not the ones selling at Saturday markets. They are the ones selling into schools, hospitals, grocers, restaurants, and distributors, where the cost of being disorganized is borne as lost accounts rather than as a slow afternoon.

### The premium is unreliable

The most damaging assumption in this sector is that consumers will pay more for local, consistently and durably enough to build a business model on. The evidence does not support it. A meta-regression of the willingness-to-pay literature found substantial heterogeneity across products and contexts along with evidence of publication selection bias. A large field experiment found that a generic "locally produced" label did not increase willingness to pay for some products under realistic purchasing conditions. Research on purchase barriers consistently finds that price and availability dominate, even among consumers who express strong preference for local food.

The honest reading is that stated preference is real and revealed premium is conditional. Some products in some contexts sustain a premium. A strategy that assumes a general one will fail.

This has a direct consequence for how the opportunity must be framed. If local supply cannot count on charging more, it has to compete on delivered cost. That moves the entire analysis away from marketing and toward operations, which is where it belongs.

### "Local" is a contested boundary, and the boundary determines the market

USDA program definitions commonly treat local as marketed within 400 miles of origin or within the same state. Consumer perception surveys have found a majority placing the boundary closer to 50 miles. For logistics purposes the practical working range is 50 to 100 miles, against a conventional supply scenario of 1,000 to 1,500 miles.

The gap between these definitions is not academic. The addressable market, the delivered-cost advantage, and the variety a region can supply all change materially depending on which radius is in use. Any sizing claim that does not state its radius is not a sizing claim.

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## Where the Money Actually Goes

The competitive question is not whether local farms can grow food. It is whether local food arrives at a buyer at an acceptable delivered cost. That resolves into a simple decomposition:

**Delivered Cost = Production Cost + Delivered Overhead**

Delivered overhead is everything required to sell a unit that is not growing it: transport, handling, cold storage, spoilage and shrink, scheduling friction, payment and administrative overhead, and the cost of coordination that failed and had to be redone.

Local production does not generally enjoy a production-cost advantage. Small operations lack scale in inputs, equipment, and labor utilization, and they carry regressive fixed costs. ERS estimates of Food Safety Modernization Act Produce Rule compliance show the smallest farms facing substantially larger costs as a share of sales than large ones. Separate ERS work documents that produce buyers frequently demand third-party audits beyond what regulation requires, which adds cost that scales with the number of buyer relationships rather than with volume.

The local advantage, where it exists, is entirely in delivered overhead, and specifically in the components that scale with distance and time: transport, refrigeration dependence, spoilage exposure, and handoff complexity. That advantage is real. It is also routinely forfeited, because uncoordinated local supply substitutes one form of overhead for another. The fuel saved by proximity is spent again on phone calls, manual availability updates, failed deliveries, unsold perishables, and the owner's attention.

This is the analytically important point. The centralized system's dominance is not primarily a production story. ERS Food Dollar data show the farm share at roughly 16 cents of each food dollar in 2023 under the marketing bill methodology, with the remainder absorbed by processing, transportation, wholesaling, retailing, and foodservice. The centralized system wins on the marketing and logistics stack, which is precisely the stack that coordination quality governs. Local supply is competing against a system optimized for exactly the function local supply performs worst.

## What price omits

Price is a single number reporting on a multidimensional situation, and it systematically omits several dimensions that determine whether a system is worth operating in.

Waste-adjusted output differs from physical output. Two systems can place identical volume on a shelf while one consumes far more labor, energy, and product to do it. Labor and attention burden is a real cost that appears nowhere on an invoice: the difference between planned execution and

reactive coordination is the difference between a farm that can grow and a farm that spends its season on the phone. Planning confidence governs what gets planted at all, since a producer cannot safely grow what cannot safely be sold, which makes underproduction and narrow crop plans rational rather than timid. Variety functions as operational flexibility, buffering demand uncertainty and creating substitution pathways that reduce waste. Resilience determines what a shock costs.

The consequence is a distinction worth holding onto. Some systems compete by managing where loss lands, using scale and contractual leverage to push risk onto weaker nodes. Others compete by reducing how much loss exists. Both logics operate in food systems simultaneously. The centralized system is extremely good at the first, absorbing and distributing loss across a very large network. Local systems have no realistic path to winning at loss trading, because they have neither the scale nor the leverage. Their only structural opening is loss reduction, and loss reduction is a coordination problem.

Stated plainly: the objective is not to romanticize local production. It is to stop mistaking preventable loss for unavoidable cost.

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# The Coordination Mechanism

Understanding why coordination is the leverage point requires seeing it as a risk problem rather than an information problem.

Producers limit planting, diversification, and harvest scaling when sell-through is uncertain. Buyers avoid relying on local supply when service levels are inconsistent. Logistics and handling infrastructure stays underbuilt when volumes are irregular. Each of these responses is individually correct, and together they produce a stable, suboptimal equilibrium in which both sides have adapted to uncertainty and the system never accumulates the infrastructure that would make it reliable.

The reinforcing loop that breaks that equilibrium runs in a specific order. Higher sell-through certainty lowers the downside risk of producing near capacity. Lower risk enables reinvestment in equipment, wash-pack, cold storage, season extension, small processing, and labor stability. Reinvestment improves capacity, quality consistency, and fulfillment performance. Better performance improves delivered economics through less waste and fewer failed deliveries. Better economics and reliability support more consistent purchasing. Consistent purchasing raises sell-through certainty.

Two properties of this loop govern the strategy.

**It has an entry threshold.** The loop is self-reinforcing only past a critical point, expressible as a two-sided feasibility window: a region where producers

are better off or at least no worse off selling through the local channel, and buyers are better off or at least no worse off on delivered cost and service relative to their alternatives. Below that threshold, coordination requires exceptional effort or subsidy to sustain. Above it, repeated use becomes rational for both sides without persuasion. The entire strategic problem is finding and crossing that threshold in a bounded setting rather than arguing for local food in general.

**It has a plateau.** The loop does not compound indefinitely. It runs into land and agronomic limits, labor availability, adjacency and perishability windows, demand density and seasonal alignment, and handling capacity. Two constraints bound it most sharply: the adjacency radius beyond which delivered overhead erases the local advantage, and the variety capacity that determines whether a region can supply a basket wide enough to make local purchasing convenient rather than supplementary.

Because feasibility is transitional rather than binary, the practical path is narrow before it is broad: a limited product basket matched to local comparative advantage, a limited radius where adjacency is strong, seasonal emphasis where alignment is naturally high, and pilot lanes where routing and handling can be stabilized. Utilization then widens the feasible set.

A secondary effect is worth noting because it is frequently asserted on moral grounds and is better argued on economic ones. A transparent, adjacency-based market rewards variety, because local demand is diverse, seasonal, and substitution-heavy. Variety reduces a producer's exposure to single-crop demand shocks and weather volatility, allowing output to be managed as a portfolio rather than a single bet. Regenerative practice tends to align with those conditions: it supports broader product mixes, reduces purchased-input dependence over time, and benefits from the multi-season planning stability that sell-through certainty provides. The claim is not that regenerative methods are morally inevitable. It is that under adjacency and transparency they can become economically selected more often, and that attribute premiums can only be discovered where attributes are legible.

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# The Model Landscape

Northeast Ohio and the surrounding region contain an unusually complete set of local food business models. Read individually, each is a different organization. Read together, they are a catalog of strategies for absorbing coordination cost, and the pattern is more informative than any single entry.

**Aggregation and distribution.** Food hubs consolidate supply from multiple producers into a stream that institutional and commercial buyers can actually order against, taking on ordering coordination, limited storage and packing,

and last-mile distribution. Online foodshed aggregators run weekly order cycles with pickup networks, presenting many farms as a single cart to the buyer and a single channel to the producer. The coordination failure solved is fragmentation on both sides. The equity lever is volatility reduction for producers who would otherwise sell direct-only.

**Cooperative pooling.** Farmer-owned cooperatives keep member farms independent while coordinating through shared standards, a shared brand, and pooled market access, sometimes diversifying across product categories to stabilize cash flow. The coordination failure solved is individual exposure to demand swings. The equity lever is retained value capture, since margin stays with producers rather than passing to a middleman.

**Year-round retail nodes.** Local-first grocery formats and multi-vendor market stores convert seasonal, presence-dependent selling into stable shelf access, so producers can sell without staffing a stall or operating a storefront. Some add demonstration kitchens and education, which raises effective demand by making unfamiliar ingredients usable. The coordination failure solved is the labor and time cost of consumer-facing operations. The equity lever is channel access without retail capital.

**Subscription and pre-commitment.** Aggregated weekly share programs combine products from many farms into unified distribution against subscribed demand. The coordination failure solved is demand uncertainty itself, converted into forward commitment. The equity lever is planning stability.

**Shared processing and infrastructure.** Licensed shared-use kitchens, cool storage, custom meat processing, and regional grain milling let small operators rent capacity instead of financing a plant. Value-added processing also lifts margin capture, whether through whole-animal utilization or turning raw grain into kitchen-ready product. The coordination failure solved is the capital wall. The equity lever is access to capability without ownership.

**Price discovery through auctions.** Producer auctions in grower-dense areas create a centralized selling venue for many small growers and a predictable procurement routine for regional grocers. The coordination failure solved is matching cost. The tradeoff is that price volatility shifts bargaining power, and the venue itself becomes the point where terms are set.

**Vertical integration.** Farm-to-retail operations internalize the chain, capturing retail margin and owning the customer relationship. The coordination failure solved is dependence on external channels. The equity lever is control, purchased with capital and operational scope.

**Waste-to-input loops.** Route-based organics collection and processing converts food waste into soil amendments sold back to growers, closing a

regional loop and, in at least one case, distributing value through worker ownership.

**Governance and funding structures.** Fiscal sponsorship allows distributed projects to access philanthropic funding under a sponsor's compliance infrastructure without each building standalone nonprofit operations. Protected-landscape farm programs use long-term leases to reduce tenure uncertainty enough to justify capital investment, paired with market and education channels.

Taken as a set, these models establish something important: the region is not missing the functions of a food economy. Aggregation exists. Processing exists. Year-round retail exists. Price discovery exists. Forward commitment exists. Shared capital infrastructure exists. Producer density, including a substantial Amish and Mennonite grower base, is a genuine regional asset that most metropolitan areas do not have.

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# The Structural Ceiling

If the functions all exist, why does the coordination problem persist?

Because each model absorbs coordination cost into an organization, and an organization must be funded. The hub takes a margin. The aggregator takes a margin. The retail node takes a retail markup. The auction takes a commission and imposes price variance. The vertically integrated operation funds coordination out of the retail margin it captured by taking on retail risk. In every case, the coordination function is paid for out of the same delivered-cost gap that made local supply uncompetitive in the first place.

This produces the observed economics. The 2019 National Food Hub Survey found approximately two-thirds of hubs breaking even or better, which also means about a third were not, and "breaking even or better" is a low bar for an enterprise carrying inventory risk on perishables. The survey identified the recurring constraints as meeting buyer pricing requirements, managing seasonality, and balancing supply and demand. All three are coordination problems, and none of them is solved by the hub existing. The hub relocates them.

There is a second and less obvious ceiling, and it is the reason substrate design is a strategic question rather than a technical one.

Improving coordination makes a market more valuable. A more valuable market is a more strategically contested one. Better information attracts investment in privileged signal capture, in control points such as platforms and proprietary tooling, and in rule-setting authority, because whoever defines formats, terms, and interfaces accumulates structural power. The predictable

result is a system that becomes more efficient and less equitable to operate in at the same time, as the minimum viable participant comes to require capital, expertise, and access that smaller participants cannot assemble.

The pattern has a recognizable shape across technology diffusion generally. In the scarce stage, the technology is expensive and participation is elite. In the diffusion stage, costs fall, access widens, and usefulness peaks because many actors can participate. In the capture stage, scale and value rise, control points re-concentrate, and complexity becomes a gate. The system may remain highly productive while becoming less navigable by ordinary participants.

Applied here, this means transparency alone is not the goal, and publishing data is not transparency. Functional transparency requires comparability so that signals mean the same thing across participants, verifiability so that trust does not cost more than the transaction, and access symmetry so that the participants who can see a signal can also act on it. A coordination improvement that delivers visibility without those three properties will concentrate advantage rather than distribute it.

This is the argument that rules out the otherwise reasonable answer of building a better platform. A platform that owns the coordination layer for a region would work. It would also become the control point, and the gains it produced would accrue to whoever owned it. That is not a moral objection. It is an observation that the strategy would solve the coordination problem by recreating the structural position that local producers are already disadvantaged by.

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# Posture: Infrastructure Rather Than Intermediary

The posture that follows from this analysis is to compete on the coordination layer as infrastructure, not to compete as another intermediary.

The template is well established in open platforms. Openness does not eliminate competition; it relocates it. When the underlying artifact is copyable, advantage shifts to the quality of the reference implementation, to interoperability and backward compatibility, to documentation and education, to migration and integration tooling, to governance clarity about what is official and what is merely compatible, and to legible trust signals. Successful open platforms pair a permissive technical surface, where copying and extension are allowed, with a controlled trust surface consisting of the reference implementation, the brand, and the governance around them. The platform leader does not need to own the market. It needs to be the most trusted point of coordination.

The parallel pattern in information markets is that authority can emerge from ordering rather than owning. An organizer that indexes and presents an open environment better than alternatives can hold a durable position without owning the underlying content.

Applied to this market, four commitments follow from the analysis rather than from preference.

**Publish the coordination grammar.** The schemas, structural definitions, and tooling that make nodes legible to one another should be open, so that adopting them does not require trusting the publisher's future behavior. This is what makes the substrate safe to build on for a hub that has no reason to trust a vendor with its supplier relationships.

**Maintain the reference implementation as the safe default.** Authority in this posture comes from being the best-executed and best-documented implementation, not the only permitted one. That is the asset, and it has to be continuously earned.

**Do not take a cut of the transaction.** Revenue drawn as a percentage of the coordination it enables converts the substrate into a toll. It also reintroduces exactly the margin extraction that caps the intermediation models. Services, hosting, integration, and support are the appropriate revenue surfaces because they scale with work performed rather than with value intercepted.

**Displace a bill rather than adding one.** The practical form of the above at the individual client level is that the offer should replace existing software spend rather than sit on top of it. Eliminating the platform subscription layer by integrating payment processing directly is structurally stronger than competing on processing rates, because it removes a cost rather than shaving one. A buyer evaluating a lower rate is comparing percentages. A buyer evaluating a removed subscription is comparing a line item to zero.

## The wedge

The strategic sequencing problem is that infrastructure has no adoption path if it is offered as infrastructure. Nobody buys a coordination substrate. They buy a website, an inventory system, a point of sale that works, and an invoice that goes out on time.

The wedge is therefore to earn the integration position by being the operator's software vendor first. A hub, retail node, or multi-channel producer that runs its storefront, inventory, and payments on a common stack is already producing structured operational data as a byproduct of running its business. Interoperability between two such operators becomes a configuration

question rather than an integration project. The coordination layer arrives underneath the businesses rather than being sold to them as a category.

This also resolves an otherwise awkward positioning question. The intermediation models surveyed above are not competitors. They are the customer base. A food hub is a coordination-intensive business with a real software bill and a real reconciliation burden, which makes it a good client and an excellent eventual network node. Competing with them would be both harder and less useful than serving them.

The actual competitive set is narrower: general commerce platforms that charge subscription plus processing and do not model food-specific constraints such as perishability windows, variable availability, split channels, and weight-based pricing; sector-specific marketplaces that take transaction margin; and, most commonly, the incumbent that is spreadsheets, phone calls, and a personal relationship with the buyer. The last of these is the real competitor and it is free at the point of use, which is why displacement has to be argued on total burden rather than on features.

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# Segmentation and Sequencing

Not every participant in a local food economy is a viable early client, and the difference is not size. It is coordination load.

The highest-value profile has four properties. The operation sells finite inventory across two or more channels, which creates a reconciliation burden that grows with success. It carries an existing software bill that can be displaced, which converts the sale from a new expense into a substitution. It generates enough monthly volume that the subscription math is favorable rather than marginal. And it is owner-operated with a single decision maker, which keeps the sales cycle short and avoids board approval dynamics.

By that filter, year-round local food retail and producers selling both wholesale and direct are substantially higher-value targets than seasonal market vendors. A seasonal vendor has low coordination load, no software bill to displace, and revenue too concentrated in a few months to support recurring cost. The instinct to start with farms because the mission is about farms leads directly to the least viable segment.

A related discipline point concerns client type. Revenue-generating businesses evaluate a recurring fee against customer acquisition return, and that math works. Nonprofits and personal-brand clients often cannot support the same math, which is why tiered pricing by client type is more defensible than a single flat rate. Pricing also carries signal: a low flat rate with free design reads as low durability to a cautious buyer rather than as a bargain.

On go-to-market method, the evidence from prior effort is that speculative demonstration builds have diminishing returns. A large volume of unsolicited demo sites produced limited conversion. Existing demos remain useful as conversation tools within an active sales process, and referrals from satisfied clients are a better growth channel than continued cold outreach, because the trust problem in this market is larger than the awareness problem.

Sequencing across the whole strategy therefore runs: individual operators first, on displaced software spend and demonstrated reliability; then multi-channel and hub-scale operators where coordination load is highest and the data byproduct is richest; then interoperability between two or more operators who already run compatible stacks, which is where the coordination thesis is first actually tested rather than argued; and only then any regional claim. Each stage funds the next and produces the evidence the next requires.

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# Risks and Falsification

An analysis is more useful when it states what would prove it wrong.

**The coordination thesis may be smaller than claimed.** It is possible that delivered-cost gaps in this region are dominated by production cost and regulatory compliance rather than by coordination friction, in which case better coordination improves operations without changing competitive position. The test is whether a bounded scenario can be found in which producers improve and buyers are non-worse-off on delivered cost and service. If no such window exists under realistic assumptions, the thesis fails on its own terms, and that is a decision-grade result rather than a disappointment.

**The wedge may not connect to the platform.** Selling websites and point-of-sale integration to individual operators is a viable services business and may simply remain one. The link from vendor relationship to interoperable network is a hypothesis, not a mechanism, until at least two operators are actually exchanging structured operational data in production. Until that happens, the platform thesis is unproven regardless of how many clients the services business has.

**The open posture forecloses later options.** Committing not to take transaction margin and to publish the grammar removes revenue models that would otherwise be available if scale were achieved. This is a real cost, accepted deliberately, and it should be acknowledged as a constraint rather than described only as a virtue.

**FND is subject to the same capture dynamic it describes.** If the coordination layer for a region runs on one implementation maintained by one

company, that company is a control point regardless of its licensing. The open grammar and the reference implementation posture are what make the position survivable, but they are commitments that have to be honored under future financial pressure, and the analysis loses credibility if that risk is not named.

**Regional density cuts both ways.** The same infrastructure that makes the region attractive means several established organizations already occupy adjacent positions, some with longer relationships and more capital. Serving them is the stated strategy, but an incumbent that decides to build its own layer is a faster competitor than a startup would be.

**Concentration risk in the current client base.** A services business with a small number of flat-rate clients has limited resilience to a single departure, and the timeline pressure of scaling before a return to school compresses the window in which the client base can be diversified.

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# Conclusion

The local food market is small in share, unreliable in premium, and structurally disadvantaged in the parts of the cost stack that dominate delivered price. None of that is fixable by advocacy, and a strategy that requires consumers to pay more because they should is not a strategy.

What is available is narrower and more durable. Delivered overhead is the only component where adjacency confers a real advantage, and coordination quality is the largest recoverable share of delivered overhead. The reinforcing loop between sell-through certainty and reinvestment is well understood and has a definable entry threshold. Northeast Ohio already contains the organizational functions a regional food economy requires, and the missing element is not another organization but the substrate that would let the existing ones operate as a network rather than as neighbors.

The posture is to build that substrate as infrastructure, publish it rather than own it, fund it through services rather than through a cut of what it enables, and earn the position underneath the market by being useful to individual operators before being necessary to any of them. That posture accepts a lower ceiling on extractable value in exchange for a defensible position and a network that participants have reason to trust.

The thing worth being clear about is that this is a bet on reducing loss rather than on capturing margin. It only pays if the loss is as large and as preventable as the analysis claims. That is the question the next stage of work exists to answer.

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# Sources and Further Reading

Market sizing, channel mix, and cost structure draw on USDA sources: the National Agricultural Statistics Service Local Food Marketing Practices Survey highlights for 2020 direct farm sales, Economic Research Service reporting on trends in local and regional food systems, and the ERS Food Dollar Series for the farm share and marketing bill decomposition. Figures cited here are drawn from the internal economic disadvantage evidence pack and reflect 2017 through 2023 reference years; current figures should be confirmed before external publication.

Compliance cost evidence draws on ERS estimates of Food Safety Modernization Act Produce Rule compliance costs by farm size, and on ERS work documenting retailer food safety audit demands beyond regulatory requirements.

Demand realism draws on the meta-regression literature on willingness to pay for local food, on field-experimental work testing generic local labeling, and on research identifying price and availability as dominant purchase barriers.

Intermediary viability draws on the 2019 National Food Hub Survey conducted by the Michigan State University Center for Regional Food Systems and the Wallace Center at Winrock International, and on modeling work on economies of scale in produce aggregation hub placement.

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