

PRACTICAL ASPECTS OF MANURE MARKETING

Prepared by
H.L. Goodwin, University of Arkansas

Concerns about potential environmental impacts from traditional land application of animal manure have increased substantially in the past 20 years. It is inevitable that animal agriculture must embrace alternative management strategies for animal biomass, particularly given the areas of concentrated production and the relatively high nutrient content of manure. These management strategies will, by necessity, focus on what to do with *excess* manure, i.e., manure that can no longer be applied to agricultural lands due to environmental concerns. It has become widely recognized that exporting excess manure — from the farm, from the watershed, or even from the entire area of concentrated animal production — is the best option for avoiding excessive nutrient loading in such areas.

Animal biomass export — whether in raw or processed form — is more often than not economically challenging under current (or near term) economic conditions. Individual producers typically have limited financial resources available from their operations to ameliorate environmental concerns in an economically feasible manner without substantial reorganization of manure handling systems. Except for a few instances around the country, export activities have proved *not* to be economically viable

Land-applied manure as a fertilizer is, in the near term, likely to be the most economical means of disposing of animal biomass in many areas. Absence of formalized and sufficient marketing arrangements is a principal obstacle to increasing the use of manure as fertilizer in regions of concentrated animal production. At present, farmers rely largely on informal, case-specific arrangements that meet the idiosyncratic needs of individual parties for disposal of manure off their own farms. But these arrangements are difficult, if not impossible, to extend on the broad scale necessary to address the environmental and economic problems that have arisen in the past few years for a number of reasons. The exact nutrient content of the manure varies with producer and would be

difficult to specifically verify. Differences exist in marketing requirements for different livestock species. Excess manure production is often a regionally isolated problem in areas of varying climate, topography, soil capabilities, production concentration, agricultural cropping patterns, age of production facilities and transportation infrastructure. These regions may be subject to varying environmental patterns and standards. Further complications arise when production is in conjunction with an integrated firm. In addition, there is a considerable lack of credible, specific information to allow a true evaluation of how much manure is being produced and what constitutes “excess” manure and how much of the excess to export to effectively address the problem.

Options for reorganizing handling systems possess a common characteristic: They must facilitate efficient and effective excess manure transport from concentrated production areas at a sustainable market price to result in proper utilization of manure. Low market price is the first and most critical factor to be addressed. Existing manure prices must be increased to levels that meet or exceed manure’s spread costs and approach the product’s true economic value based on its agronomic value. These prices will only be sustained if sufficient infrastructure exists to handle large quantities transported over long distances. If prices cannot be established through market forces, market interventions may be necessary. An additional potential approach is to increase the relative price of manure compared to chemical fertilizers by imposing an environmental tax on chemical fertilizers. Such a tax would also limit overuse of more soluble chemical fertilizer, especially with respect to phosphorus as a component of the fertilizers.

Additional specific factors affecting marketability of manure can be grouped into the broad categories of infrastructure and logistics and “market sentiment” of the various parties involved. Infrastructure to create brokerages or exchanges to affect manure ownership and location transfer is

essential. Such infrastructure would include determination of minimum and maximum volumes and service areas as functions of prices, regulations, transportation and quality and acquisition/dissemination of price, quantity and quality information. Adequate transportation and acceptable timing of manure pick-up and delivery must also be guaranteed for an effective marketing system to be realized.

Although these factors certainly must be addressed to achieve a viable export program, the economics of litter export are the bottom line and will determine whether export programs move forward. On a case-by-case basis, potential export receiving markets must be delineated and cost-price relationships and market constraints must be identified. Likely impacts of functioning manure markets on supply and demand, including technological and contractual changes, should also be considered.

Coordination of manure marketing at the regional level by establishing a mechanism that can provide large-scale coordination of litter supplies and off-farm management, including export is a mandatory component of any long-term approach. There currently exists no developed excess manure market system capable of generating positive margins on a widespread and consistent basis, thereby effectively eliminating private sector participation as a/the solution to the problem. The existing independent contract producer structure and the independent litter service provider industry are not conducive (and do not have the resources required) to establish the centralized, regionally coordinated initiative needed for large-scale, high-efficiency litter supply coordination and export. A third party enterprise could effectively serve this function and provide a wide range of benefits for producers, integrators and others involved (directly and indirectly) in litter export activities.

Management of the excess under present conditions is a cost-incurring activity, not a revenue-generating activity. Therefore, it is necessary to view options from the perspective of how best to generate supplemental funds to allow efficient and equitable management of excess manure. Four broad categories of realistic options for addressing

additional costs associated with alternative manure management practices are proposed: public sector market interventions, public sector incentives, private sector financing and augmenting incentives state or federal tax credits for managing excess manure in prescribed ways, investment tax credits for infrastructure development and permit waivers for those producers operating under an approved excess manure alternative management plan. Examples of operational incentive programs funded at the state level include those in Maryland and Virginia for litter transport and one in Texas for purchase incentives for composted dairy manure. Tax benefits that may be incorporated as augmenting incentives could be seamlessly handled by taxing local, state or federal authorities. Interventions and incentives should be viewed as mechanisms to jump start alternative manure management activities with proposed sunset provisions since it is likely that the economic value of the manure, at least in the case of easily transported manure from poultry, would rise to a break-even or better level within a few years as markets develop. Similarly, as risks decrease, elimination of these interventions could reasonably occur.

It is important to the industry that a level playing field with respect to costs continues to exist among the various production areas. That is, as regulatory pressures increase manure management costs differentially from region to region based on the regionally isolated nature of excess manure problems, producers in one region would hope that their competitive positions would be unaffected by these costs relative to another region. Various market interventions and incentives are available to the public sector and/or to the poultry industry that could resolve this impasse and enable animal agriculture in the United States to remain economically viable and competitive, including public sector market interventions (e.g., marketing orders, check-off programs, point-of-sale consumer taxes), public sector incentives (e.g., producer/transporter/end-user incentive payments), private sector financing (e.g., integrator compensation to growers), and augmenting incentives (e.g., tax credits). The interventions/incentives could be effectuated by industry-funded, consumer-funded and/or government-funded mechanisms.