Various researchers have focused on the various farmers behavior, product placement rural marketing, trends and various market interventions, such as loyalty to brand and segmentation of products versus markets and consumer behavior.

MAARTEN KOOL M (December 1, 1993) Studied Vendor loyalty of farmers: Characterisation, description and analysis at Wageningen Agriculture University Henkel-Ec Nieuwegein, The Netherlands in his detailed study on Vendor Loyalty of Farmers Distinction is made between true and spurious vendor loyalty of farmers based on two dimensions. Hypotheses are proposed describing the relationships between the two types of vendor loyalty and product-related characteristics, farm enterprise characteristics, farmer characteristics and buying variables. On the basis of an extended set of data, the existence of various types of vendor loyalty is determined (cluster analysis) and the proposed hypotheses are tested (multiple discriminant analysis). Three groups of farmers are determined with distinct types of vendor loyalty. Some interesting relationships between observed vendor loyalty and product-related characteristics, farm enterprise characteristics, farmer characteristics, and buying variables.

Sally Dibb and Lyndon Simkin (February 1994), studied Implementation problems in industrial market segmentation. Industrial Marketing Management Marketing theory suggests that market segmentation offers a range of benefits to industrial and consumer marketers alike. Experience in industrial markets, however, while supporting these suppositions, highlights the considerable practical
problems that can be faced by companies attempting to put market segmentation into practice. This paper reviews the industrial segmentation literature and considers a mix of qualitative and quantitative evidence from the European construction and agricultural markets and the UK aftermarket for car parts, making recommendations about the application of theoretical segmentation principles in practice.

**Thomas V. Bonoma and Benson P. Shapiro (October 1984)** Studied thru Evaluating market segmentation approaches Industrial Marketing Management. This research article is concerned with managing and monitoring industrial market segmentation. The economics of market segmentation are overviewed, and an attempt is made to relate the segmentation tool to costs incurred. It is recommended that managers employ more economical methods of segmentation before using more costly parts of the marketing mix. A monitoring scheme is presented with two components that helps managers assess how well their segmentation strategy converts customers to the firm, meets market needs, and represents an efficient allocation of resources.

**Sally Dibb and Lyndon Simkin (18 October 2001.)** Study was conducted on segmentation of product or better marketing strategy, and reveals that although the benefits that segmentation offers are well documented, businesses continue to encounter barriers to implementation. This raises an important dilemma. If corporations are to unlock the benefits of segmentation, there are important questions to answer about the nature of these barriers and how they can be overcome. These questions are addressed in this article by reviewing a combination of published evidence and case study material. The literature review indicates key areas for businesses to consider when implementing a
segmentation approach. These areas relate to the "infrastructure" in place at the start of the segmentation process, the "segmentation process" itself, and a series of "implementation" questions. Case studies of corporations that have attempted to develop a new or revised segmentation strategy are used to illustrate each of these areas. The themes from these cases then are used as the basis for a simple tool designed to diagnose and then treat the infrastructure, segmentation process, and implementation barriers.

**Thomas F. Funk, W. David Downey (Jul, 1983), American Agricultural Economics Association** studied "Fertilizer Purchasing Behavior of Indiana Farmers." This study examines the fertilizer buying behavior of Indiana farmers. The main buying behavior dimensions included in the analysis are: types of fertilizer used, importance and availability of services, soil testing, shopping activities, information sources, fertilizer pricing, dealer selection, and farmer attitudes. The results provide important insights into farmer behavior and preferences which can be used to develop more effective marketing programs for fertilizers and related services.

**T Vernimmen, W Verbeke and G van Huylenbroeck (2001) Ghent University, Ghent, Belgium** Transaction cost analysis of outsourcing farm administration by Belgian farmers. Study reveals that modern farming is characterised by an increasing amount of regulation and hence of farm administration. This paper reports an empirical investigation of farmers' decisions regarding administrative tasks, and in particular the decision to outsource (part of) this administration. The theoretical framework is based on transaction cost economics, adapted and interpreted here to deal with services. The empirical analysis applies
a probit model estimated using cross-section farm survey data. Results indicate significant differences in outsourcing related to characteristics such as farmers' age, farm size and institutional environment, as well as to factors such as the complexity, uncertainty and time requirements of the administration concerned.

Gordon R. Foxall European Journal of Marketing ( Year: 1979 ) Farmers' Tractor Purchase Decisions: A Study of Interpersonal Communication in Industrial Buying Behavior Study demonstrates that farmers, in their tractor-buying decisions, have similar behavior to professional buyers in manufacturing industries. Uses evidence collated from a survey concerned with identifying farmers' perceptions of the socioeconomic factors affecting their decisions. Draws attention to the patterns of interpersonal communication accompanying farmers' purchases and the complexity of opinion leader influences.


A study was conducted during 2000-2001 in Allahabad District, Uttar Pradesh, India, to evaluate precise selection and enhanced utilization of farm tractor for sustainable development. The timeliness in operation, horse power, custom service, resale value, after sale service, fuel efficiency, purchase price and special technical features were the purchase factors considered. Results showed that timeliness in operation was the most important purchase factor for 40% of the farmers. The
trailer and leveler were found the potential farm equipments for farmers intending to provide hiring services to other farmers. The owners of both equipments could utilize their tractors more than 1000 h in a year. Trailer was found more useful (owned by 82% of the farmers) than leveler (purchased by 62% of the farmers).

Gullberg, T., Johansson, J.  
Affiliation: Department of Mathematics, Dalarna University, Herrgårdsvägen 122, S-776 98 Garpenberg, Sweden.

Baltic Forestry, (2004) A hitch hook device for improved mobility for farm tractor with un powered trailer. study on a new hitch hook device for the four-wheel drive farm tractor pulling an Un powered trailer was constructed and tested. The device allows for a heavy load on the hitch hook without risking stability. A hydraulic cylinder creates a force between the trailer frame and the upper three-point attachment that redistributes weight from the load to the tractor's front axle. The device also includes a mechanical construction with joints and a sliding surface that allows the cylinder to be directed straight backwards from the tractor. A hydraulic regulation system was used to manipulate the force developed by the cylinder. Using this device it was possible to transfer an additional 770 kg from the trailer's un powered wheels to the powered wheels of the tractor while maintaining weight distribution on the front axle (~25% of the tractor's total weight).

The traction force increased roughly in proportion to the increased weight on powered wheels. This corresponded to a 15% increase in traction force on the relatively heavy tractor used in this study. The same traction increase, approximately 15%, was also achieved when using four-wheel
drive instead of rear-wheel drive. The hitch hook device also resulted in less skidding and increased uphill mobility of tractor with trailer. For more generalized usage of the device, the design needs to be simplified and adapted to fit various tractor-trailer combinations.

Girja Sharan, IIMA Working Papers with number 1278 (01 Aug 1995)

Demand for Farm Tractors Study was conducted for demand prediction for farm tractors is of interest to industry and government , two different models were developed earlier. One termed a causal model, was similar to a model of a process driven by potential difference. The other was based on time series analysis. In this paper the performance of these is examined over a ten-year span, and their special merits discussed.

Jing Wu, Gregory M. Perry (2004)

American Agricultural Economics Association. Estimating Farm Equipment Depreciation: Which Functional Form Is Best & quest; In the study Farm equipment depreciation has been the focus of research in economics and engineering for more than 60 years. Using data from 16 years of auction sales, depreciation functions were estimated for 17 types of equipment, including tractors, combines, tree planters, discs, and trucks. The Box-Cox function did the best job of explaining variability in these various sales data bases and in forecasting prices in an out-of-sample data set. Nevertheless, the much less complicated double square root and sum-of-year's digits functions performed nearly as well. Simplified double square root estimates are provided for practitioners interested in forecasting equipment depreciation.

Study is done for farmers with high debt/asset ratios, leasing is an attractive option for securing the use of farm machinery. Under the current tax laws, financial leasing carries lower after-tax costs than loan purchasing. By size, farms with more than $500,000 in sales had the highest proportion of U.S. expenditures for farm equipment leasing. By region, the Pacific States, Corn Belt, Delta-Southern Plains, and Northern Plains regions accounted for the largest proportion of expenditures. By farm type, cash grain, dairy, general livestock, and field-general crop farms recorded the largest proportion of leases. Because many are large farms, they require the use of large equipment whose resale caters to a very limited segment of the farm sector. Without an obligation to purchase, these farmers are protected by leasing from the decline in the equipment's market value.

Review of studies on Factors: -

Factors effecting purchase decision & product feature requirements to the changing agricultural dynamics

Multi cropping pattern for increasing farm productivity In India, as the multi cropping is growing and need arises to use farm tractors to their utmost capabilities for various high breed crops, utility and economics of farm tractors available in India and being sold need to be categorized to suite farmer's requirements and compatible tractors to be designed and sold in various markets for high yield and farm productivity.

In this scenario it has become essential to develop an effective Strategy for Farm tractor buying behavior and right product feature requirements.
Marteen Kool M December 1, 1993- Studied vendor Loyalty of Farmers Characterization, description and analysis, which was based on vendor loyalty and product-related characteristics, farm enterprise characteristics, farmer characteristics, and buying variables.

Evaluating various approaches to market segmentation.
Various studies have been conducted to evaluate the suitability of approach to the market segmentation, a similar study was conducted by Thomas V. Bonoma and Benson P. Shapiro (October 1984) – The economics of market segmentation is overviewed, and an attempt is made to relate the segmentation tools to the cost incurred, which brings the strategy for the managers to employ more economical methods of segmentation before using more costly parts of the marketing mix, and the presented monitoring scheme with two of its components out of which one strategy converts customers to the firm, meet market needs and the other represents the efficient allocation of resources. Purchasing behavior of Farmers or evaluation of purchase decision made by farmers.

Evaluation of behavior of farmer is the most important aspect impacts on farmers’ buying decisions. The competitive battle for machinery sales and market share is fought on claims of offering competitively superior product features and benefits to farmers. Each manufacturer hopes both that its brands and models will be seen by farmers as delivering a superior package of benefits over competitive offerings and that farmers will actually vote in their favour at the time of purchase.

To study the behavioral characteristics of Farmers, in purchasing the agro related products, a study has been conducted for “Fertilizer purchasing behavior of Indian Farmers” by Thomas F. Funk, W. David Downey
The main buying behavioral dimensions included in the analysis are:

- Types of Fertilizer Used
- Importance and availability of Services
- Information sources
- Fertilizer pricing
- Dealer selection
- Farmer attitudes

The analysis resulted in the study can be used for developing more effective marketing programs and related services.

**Farmer’s tractor purchase decisions**

**Social and Economic Factors**

In studying the interpersonal communication of Farmers in industrial buying behaviour, a study been performed by Gordon R. Foxall, European Journal of Marketing (Year: 1979), which demonstrates that in tractor buying decisions, have similar behaviour to professional buyers in manufacturing industries. The study revealed and highlighted the perceptions of farmers were based on Social and economic factors which are affecting their decisions, and the complexity of opinion leaders influences the decisions. Precise selection and enhanced utilization of farm tractors for sustainable development

A study was conducted during 2000-2001 in Allahabad district, Uttar Pradesh, India, to evaluate precise selection and enhanced utilization of farm tractors for sustainable development by Yadav, L. S.(2005) Author Affiliation: Department of Agricultural Engineering, North-Eastern Regional Institute of Science & Technology, Itangar, P. O. Nirjuli - 791 109 (Arunachal Pradesh), India. The study resulted, that timeliness in
operation was the most important purchase factor for 40% of the farmers. The selection of farm tractor compatible with potential farm equipment e.g. trailer and leveler, could assist farmers in utilizing the farm tractors to a use of more than 1000 hrs in a year.

Purpose – With brands being an important source of competitive advantage, knowledge of branding is needed to inform their management. After reviewing the literature, the article aims to report the findings of a case study that investigated the role of branding in the industrial purchase of agricultural tractors in the UK. The study's overall conclusion is that branding can play an important role in industrial purchase decisions.

Design/methodology/approach – Various attributes, together with levels of these attributes, were identified from the literature and a series of semi-structured interviews with three farmers and farm contractors. Subsequently, conjoint analysis was employed to reveal how purchasers made their purchase decision. A total of 428 farmers and farm contractors (a 28.7 per cent response rate) ranked 25 cards that had been constructed to profile various hypothetical tractor designs.

Findings – Five attributes appeared from the literature review and interviews – brand name, price, dealer proximity, quality of dealer's service, and buyer's experience of the dealer. The conjoint analysis revealed that brand accounts for 38.95 per cent of the purchase decision, ahead of price (25.98 per cent) and service (14.90 per cent). The importance of brand varies according to the tractor brand. Also, the overall utility varies, with John Deere and New Holland brand names appearing as marketing assets and Valtra, Massey Ferguson, and Case IH
as marketing liabilities. Among the study's other findings are that UK tractor buyers are brand loyal.

**Research limitations/implications** – The study focuses on tractors in the UK, so while it provides an insight into the role of branding in an industrial purchase situation, further research is required in other product categories before the findings can be generalised.

**Practical implications** – Manufacturers and distributors need to maintain a strong image. Also, they may charge higher prices for tractors, using the extra revenue to reinforce their brand image. On-farm demonstration of new tractors is suggested as an experiential marketing strategy. Special attention should be given to the location of dealers and the service they provide.

**Originality/value** – Research concerning branding in an industrial purchase context is limited, dated, or contradictory. This article contributes with empirical findings on industrial brand management in an important and relevant context.

Rural marketing is as old as the civilization. Surplus of agro-products are exchanged in earlier days in the barter system. The introduction of currency, transport, and communication has increased the scope of rural market. This paper discusses the present scenario of rural marketing especially rural produce, and its importance, current trends, and highlights certain problems related to rural marketing.

Further it highlights the improvements which make the rural marketing system most effective. Marketing of agricultural production has received
adequate attention of researchers, policy makers, and central and state
governments. This has resulted in establishment of regulated markets
with an aim to see that the agricultural produce get better price. The
advent of commercial and market oriented farming, with the help of
modern agricultural technology, necessitated the use of manufactured
inputs like fertilizers, pesticides, high yielding varieties of seeds to
improve rural produce.

Rural marketing facilitate flow of goods and service from rural producers
to urban consumers at possible time with reasonable prices, and
agriculture inputs/ consumer goods from urban to rural.

Marketing is an exchange function; it was started much earlier when
civilization started but not recognized as marketing. All economy goods
are marketed in terms of goods and services (Barter system). Now money
is being practiced as a good exchanging medium. The surplus produce
has been brought to sophisticated places where both buyers and sellers
meet together and exchange goods, services and ideas in terms of money.
The market may be a street, or a small town/ metropolitan city.
Developments in infrastructure, transport, and communication facilities
increased the scope of the rural market.

Environment: The difference between rural and urban markets on the
basis of various socio-economic factors, most dominant among them
being the source of income, the frequency of receipt of income, the
seasonal nature of income and consumption. Rural markets are small,
non- contiguous settlement units of village relatively low infrastructure
facilitates, low density of population, their life styles is different. Rural
consumers are mostly farmers whose income receipts are dependent on the vagaries of nature.

Importance of agri-marketing, Rural population has been increased about 74% of the total population, the demand for products and services has increased a lot in rural areas. Green revolution in the North and white revolution in the West has brought about a new prosperity in the lives of rural people. The multi prone activities undertaken for overall development of villages. Government emphasis on rural development has caused significant changes in the rural scenario. Moreover, the special attention given for infrastructure development through the successive Five-year plans has improved the buying and consumption pattern of rural people.

The idea of cold storage, air cargo facilities developed the rural market. The Indian cut roses to European countries, Indian meat and poultry products to Saudi countries denotes that markets are located at different places and production centers are located at other places. This is because of uneven distribution of natural resources, climatic and soils conditions.