BRAND LOYALTY OF LIVESTOCK FARMERS IN SOUTH AFRICA

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Abstract

In this study brand loyalty of pharmaceutical livestock products among commercial farmers was measured. The purpose of the study was to assist agribusinesses to identify the dominant determinant when commercial farmers purchase pharmaceutical livestock products from them. A structured questionnaire was used to employ an empirical study in a quantitative style to determine the commercial farmers' perceptions and buying behaviour when they buy pharmaceutical livestock products. The results indicated that the data were reliable. It also indicated that no practical significant differences existed between the four categories of pharmaceutical livestock products exist which means that these product categories could be managed similarly with regard to brand loyalty. All twelve the brand loyalty influences are regarded to be important. The influences Customer service, Brand performance and Brand trust are the three most important influences.

Keywords: Agriculture, Agribusiness, farmer buyer behaviour, brand loyalty, pharmaceutical livestock products.

1. Introduction

1.1. Agriculture in South Africa

Despite its relative small share (between 2.6% and 3%) of the total GDP in South Africa, the Department of Agriculture, Forestry and Fisheries (DAFF, 2013a) states that primary agriculture is still an important sector in the South African economy. Agriculture remains a significant provider of employment, especially in the rural areas, and a major earner of foreign exchange.

The primary agricultural sector has grown by an average of approximately 11.8% per annum since 1970, while the total economy grew by 14.9% per annum over the same period, resulting in a drop in agriculture's share of the GDP from 7.1% in 1970 to 1.9% in 2011 (DAFF, 2013a). Agriculture's role in the economy is a combination of backward and forward linkages to other sectors. Purchases of goods such as fertilizers, seeds, cattle feed and implements form backward linkages with the manufacturing sector, while forward linkages are established through the supply of raw materials to the manufacturing industry.

Although 80% of land in South Africa is used for agriculture and subsistence farming, only 12% is usable for agriculture production, of this 12% of land, only 22% is classified as high potential arable land, the rest is used for grazing (GCIS, 2012). Notwithstanding this fact, South Africa, with a contribution of more than 50%, is the largest contributor to growth in agricultural exports from SADC countries (Southern Africa Trade Hub, 2011). The main agricultural activities are crop production, mixed farming, cattle ranching, sheep farming, dairy farming, game ranching, aquaculture, beekeeping and winemaking

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The total production during the production season, calculated at the average basic prices that were received by producers for 2011/2012 is estimated at R158 557 million. This figure is an increase of 12.9% on the previous years' R140 433 million. This increase is mainly a result of higher field crop prices that were achieved. Animal products contributed 47.7% of the total agricultural production. Cattle and calves slaughtered contribute 15.9% to the above mentioned 47.7% (DAFF, 2013a).

1.2. Pharmaceutical livestock products in South Africa

In the definitions of the Act of Fertilisers, Farm feeds, Agricultural remedies and Stock remedies (Act 36 of 1947) (SA, 1947) '*stock remedy' means a substance intended or offered to be used in connection with domestic animals, livestock, poultry, fish or wild animals (including wild birds), for the diagnosis, prevention, treatment or cure of any disease, infection or other unhealthy condition, or for the maintenance or improvement of health, growth, production or working capacity, but excluding any substance in so far as it is controlled under the Medicines and Related Substances Control Act (Act 101 of 1965) (SA,1965).*

2. Problem statement

Healthy animals have increased growth and fertility and are, therefore, more profitable to the farmer. However, Hunter (2005:3) says that it is alarming that there still are so many outbreaks of preventable cattle diseases in South Africa. A reported number by DAFF (2013b) states that 1 633 cattle disease outbreaks occurred. He postulates that if ten animals were affected by each outbreak, 16 330 animals would be affected and a potential cost/loss of R8 million to R10 million could be incurred by farmers.

Pharmaceutical livestock products are important in the management of animal health. In addition to playing a major role in the productivity of cattle (or other animals), it also enhances national food security and facilitate market access for livestock and their products. It furthermore protects people from food borne and other zoonoses such as Rift valley fever, Anthrax, Rabies and Bird flu (diseases that can be transmitted from infected animals to people). Pests like mosquitoes, flies, and gnats also spread diseases such as Rift valley fever, Bleu tongue and more, and can be controlled by using dips, sprays or pour-on products. Infected or sick animals can be cured by the use of antimicrobials.

Availability of the correct pharmaceutical livestock products is important as diseases as well as pests are seasonal and infections can spread rapidly throughout the farmers' entire herd leading to enormous financial losses. Pharmaceutical livestock products are developed and produced by pharmaceutical companies that specialise in animal diseases. As with the rest of the pharmaceutical industry there are patented and generic products and prices differ substantially. There are well established brands of patented products that have been used for years, but also new and generic products at a fraction of the cost of the patented products. Herewith resides the problem for agribusinesses. Which brand name, product or product range are in demand amongst its farmer clients and how loyal are these clients to specific brands. Additionally, why are these farmer loyal to specific products or brand names?

3. Research objectives

The primary objective of this study is to determine the brand loyalty of farmers towards pharmaceutical livestock product and its influence on farmer buying behaviour.

The secondary objectives to service the primary objective are to:

- Measure the brand loyalty of pharmaceutical livestock products;
- Determine if there are differences in farmer brand loyalty regarding the four different categories of pharmaceutical livestock product between Antimicrobials, Ectoparasiticides, Anthelmintics, and Vaccines;

- Measure the reliability of the data; and
- Draw conclusions and make recommendations regarding farmer buyer behaviour (regarding loyalty) and the marketing of pharmaceutical livestock products.

4. Research methodology

The research employed structured questionnaires and to record farmer buying behaviour and perceptions on a quantitative scale. The study consisted of two stages, namely informal research and formal research. As a pilot study, the researcher (being employed within the agricultural industry), engaged informally with leading farmers, farmer study groups and existing farmer clients of the agribusiness to determine their views on the dominant determinants when choosing a pharmaceutical livestock product at the agribusinesses. In essence, the two major marketing mix variables were determined to be the price and brand name.

The results from this pilot study were further researched by a formal research project whereby stratified random sampling was used to select the respondents for the study. Firstly, the agribusiness database was employed to select commercial livestock farmers. Because the farmers in the selected area in the North West Province of South Africa (see Figure 1) consist of grain, livestock and mixed farming practices, only farmers with commercial livestock numbers were considered. From this list, a total of 100 farmers were randomly selected to participate. A response rate of 60% realised, signifying that data from 60 useable questionnaires could be used.
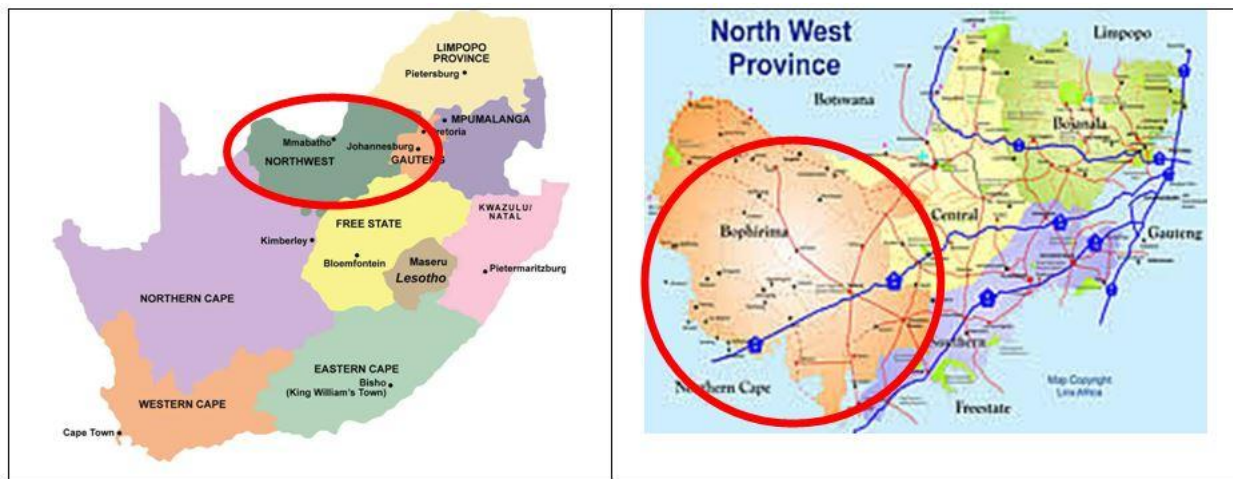

Figure 1: Geographical area of study

Questionnaires consisted of demographic variables as well as questions that measure the dominant determinants that come in play when choosing a pharmaceutical livestock product at the agribusinesses, namely price or brand name (loyalty). The A 5-point Likert scale was used to capture the data while descriptive statistics were employed to analyse the data. Questions were divided to measure the four pharmaceutical livestock product categories independently.

The results were analysed to determine if there were any practical significant differences in buying behaviour and perceptions between these four categories. The Effect size as statistical tool was employed to do so (Ellis & Steyn, 3003:52).

The reliability of the data was measured using Cronbach alpha coefficient. A coefficient of 0.70 is deemed to indicate satisfactory reliability (Field, 2007:668).

5. Results

All statistical calculations were done by Statistical Consultation Services at the North-West University (Potchefstroom Campus) using the Statistical Package for Social Sciences (IBM SPSS Statistics Version 22).

5.1. Demographic profile

The demographic profile provides an overview of the respondents, signifying the typical profile of the commercial farmers farming in the South-Western region of the North-West province in South Africa. . The detail of the profile is presented at the hand of Table 2.

Table 1: Demographic profile

Age	
20-30	12%
31-40	24%
41-50	45%
51-60	23%
61+	6%
Qualifications	
Gr. 12 (school final year)	47%
Diploma	32%
Degree	17%
Post-graduate	4%
Ethnicity	
White	90%
Black	7%
Coloured	3%
Indian	0%
Gender	
Male	72%
Female	28%

N=100; n=60

The ages of commercial farmers shows that 29% are older than 50 years, while the majority are between 41-50 years old. It is encouraging to see that 12% are young farmers (30 years and younger). Although the majority of the farmers completed school (47%), 53% studied further towards a tertiary qualification. Most of these qualifications are complementary degrees to farming, and typically consist of farming sciences, plant and animal sciences or commerce degrees). Most of the commercial farmers (90%) are white and male. In summary, the typical farmer profile shows that most farmers are aged 41 and 50, are male white, farmers, that and they possess at least a tertiary education.

Regarding the quantity of animals that a commercial farmer own, Table 2 accounts for cattle, sheep and goats owned by participating farmers.

Table 2: Frequency of quantity of animals

TYPE	0-100	101-500	500+
Cattle	14	30	10
Sheep	27	8	2
Goats	12	0	0
TOTAL	**50.5%**	**36.2%**	**11.3%**

A commercial farmer that own more than 300 animals, would be considered medium to large commercial farmer, while stock number in excess of 500 indicates large farmers.

5.2. Farmer brand loyalty

Table 3 contains the detailed answers per brand loyalty questions and shows, in addition to the frequency distribution (in percentage format), also the mean and standard deviations on each question of the product categories were calculated. In the table a low mean (<2) value means that the respondents agree with the scenario while a high value (>4) shows disagreement. High standard deviations (>1.5) mean that the respondents differ in their perception regarding the scenario. Where differences in perceptions were recorded, the data were subjected to the Effect size to determine if these differences display significant practical differences.

It is clear from the table that the respondents have similar views on all the questions (hence the low standard deviations reported). In addition, the Effect size also showed that none of the questions had significant practical differences between the four categories of products. *It could thus be concluded that buying behaviour pertaining to brand loyalty does not differ with regard to the product category and that the categories could be managed similarly.*

Table 3: Frequency table of brand loyalty results

No	Question	Mean	Standard Deviation	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1	I am very satisfied with the listed pharmaceutical livestock brands I purchase.	1.675	0.592	38.75%	56.25%	4.58%	0.83%	0.00%
2	Distinctive product attributes of pharmaceutical livestock products keep me brand loyal.	2.05	0.835	29.17%	43.33%	23.33%	4.17%	0.00%
3	My loyalty towards a particular pharmaceutical livestock brand increases when I am satisfied with that brand.	1.5	0.555	52.50%	45.00%	2.50%	0.00%	0.00%
4	I do not repeat a purchase if I am dissatisfied about a particular pharmaceutical livestock brand.	1.425	0.797	72.50%	19.58%	4.58%	2.50%	0.83%

5	I attain pleasure from the pharmaceutical livestock brands I am loyal towards.	1.925	0.602	22.50%	62.92%	14.58%	0.00%	0.00%
6	I do not switch pharmaceutical livestock brands because of the high cost implications.	3.15	1.022	9.17%	16.25%	27.50%	45.42%	1.67%
7	I do not switch pharmaceutical livestock brands because of the effort required to reach a level of comfort.	3.275	1.157	7.50%	22.92%	18.33%	40.00%	11.25%
8	I avoid switching pharmaceutical livestock brands due to the risks involved.	2.775	1.075	8.75%	41.67%	18.75%	26.67%	4.17%
9	I switch pharmaceutical livestock brands according to the prevailing economic conditions.	2.0	1.062	40.42%	37.50%	8.75%	11.67%	1.67%
10	I trust the pharmaceutical livestock brands I am loyal towards.	1.7	0.482	31.25%	67.92%	0.83%	0.00%	0.00%
11	I have confidence in the pharmaceutical livestock brand that I am loyal to.	1.7	0.557	36.25%	59.17%	4.58%	0.00%	0.00%
12	The pharmaceutical livestock brand I purchase has consistently high quality.	1.825	0.672	32.92%	52.08%	15.00%	0.00%	0.00%
13	The reputation of a pharmaceutical livestock brand is a key factor in me maintaining brand loyalty.	2.025	0.985	30.83%	49.58%	7.92%	9.58%	2.08%
14	I prefer to maintain a long term relationship with a pharmaceutical livestock brand.	2.0	0.877	31.25%	42.50%	20.00%	6.25%	0.00%
15	I maintain a relationship with a pharmaceutical livestock brand in keeping with my personality.	2.7	1.020	10.00%	39.17%	30.83%	15.00%	5.00%
16	I maintain a relationship with a pharmaceutical livestock brand that focuses and communicates with me.	1.9	0.675	22.92%	65.00%	8.75%	3.33%	0.00%
17	I have a passionate and emotional relationship with the pharmaceutical livestock brands I am loyal to.	2.15	0.675	10.83%	68.33%	15.83%	5.00%	0.00%

18	Loyalty towards a pharmaceutical livestock brand increases the more I am involved with it.	2.0	0.672	9.17%	66.25%	19.58%	5.00%	0.00%
19	Involvement with a pharmaceutical livestock brand intensifies my arousal and interest towards that brand.	2.2	0.885	17.08%	56.67%	16.25%	8.33%	1.25%
20	I consider other pharmaceutical livestock brands when my involvement with my pharmaceutical livestock brand diminishes.	2.4	0.887	16.25%	41.25%	31.67%	10.83%	0.00%
21	My choice of a pharmaceutical livestock brand is influenced by the involvement others have with their pharmaceutical livestock brand.	2.7	1.107	15.00%	33.75%	21.25%	27.92%	2.08%
22	My pharmaceutical livestock brand loyalty is based on product quality and expected performance.	1.4	0.627	64.17%	32.08%	2.08%	1.67%	0.00%
23	I have an emotional attachment with the pharmaceutical livestock brands I am loyal towards.	2.97	1.117	8.33%	32.08%	22.08%	30.83%	6.67%
24	Price worthiness is a key influence in my loyalty towards pharmaceutical livestock brands.	1.6	0.765	56.25%	34.17%	6.25%	3.33%	0.00%
25	The pharmaceutical livestock brands that I am loyal to enhance my social self-concept.	3.0	1.135	8.33%	29.17%	30.83%	20.83%	10.83%
26	I am very satisfied with the listed pharmaceutical livestock brands I purchase.	1.67	0.527	37.50%	60.42%	2.08%	0.00%	0.00%
27	I have pledged my loyalty to particular pharmaceutical livestock brands.	2.65	1.160	15.42%	39.58%	15.83%	24.17%	5.00%
28	I do not purchase/sample other pharmaceutical livestock brands if my pharmaceutical livestock brand is unavailable.	3.3	1.062	6.67%	17.50%	19.17%	49.58%	7.08%
29	I identify with the pharmaceutical livestock brand that I consume and feel as part of the brand community.	2.52	0.85	5.42%	53.75%	26.25%	12.92%	1.67%

30	I remain committed to a pharmaceutical livestock brand even through price increases and declining popularity.	3.1	1.065	7.92%	20.83%	32.50%	31.67%	7.08%
31	My loyalty towards pharmaceutical livestock brands is purely habitual	3.4	1.037	5.00%	19.58%	13.75%	55.00%	6.67%
32	I do not necessarily purchase the same pharmaceutical livestock brands all the time.	2.725	1.027	8.33%	41.67%	23.33%	23.33%	3.33%
33	I always sample new pharmaceutical livestock brands as soon as they are available.	2.825	1.012	12.92%	22.50%	34.58%	30.00%	0.00%
34	I establish a pharmaceutical livestock brand purchasing pattern and seldom deviate from it.	2.575	1.09	14.58%	44.17%	12.92%	26.67%	1.67%
35	The pharmaceutical livestock brands that I am loyal towards makes a difference in my life.	2.425	0.945	12.50%	49.58%	22.08%	14.17%	1.67%
36	I am distressed when I am unable to use/purchase a particular pharmaceutical livestock brand.	2.05	1.232	47.92%	23.75%	6.67%	20.00%	1.67%
37	The pharmaceutical livestock brands that I am loyal towards stands for issues that actually matters.	2.1	0.752	19.17%	60.83%	15.00%	4.58%	0.42%
38	The pharmaceutical livestock brands that I am loyal towards have freshness about them and portray positive significance.	2.3	0.835	13.75%	53.33%	22.92%	10.00%	0.00%
39	I know that a pharmaceutical livestock brand is relevant through the brand messages communicated.	2.1	0.705	14.17%	65.00%	15.83%	5.00%	0.00%
40	The pharmaceutical livestock brands that I am loyal towards are constantly updating and improving so as to stay relevant.	2.375	0.922	18.75%	37.50%	35.42%	6.67%	1.67%
41	I evaluate a pharmaceutical livestock brand based on perceived performance.	1.525	0.547	48.75%	49.17%	2.08%	0.00%	0.00%

42	I will switch pharmaceutical livestock brand loyalty should a better performing pharmaceutical livestock brand be available.	1.675	0.757	50.00%	36.67%	11.67%	1.67%	0.00%
43	I am loyal only towards the top performing pharmaceutical livestock brand.	2.6	1.000	12.50%	35.83%	30.00%	20.00%	1.67%
44	My loyalty towards a pharmaceutical livestock brand is based on the choice of pharmaceutical livestock brand used by my family.	3.3	1.050	5.00%	19.17%	29.17%	36.67%	10.00%

Regarding the measurement of individual brand loyalty influences, Figure 2 shows the different influences and their relevant questions. Scores below 1.5 indicates high importance, whilst a score between 2 and 3.5 signifies medium importance levels. Scores above 3.5 signifies that the brand loyalty influence is not important.
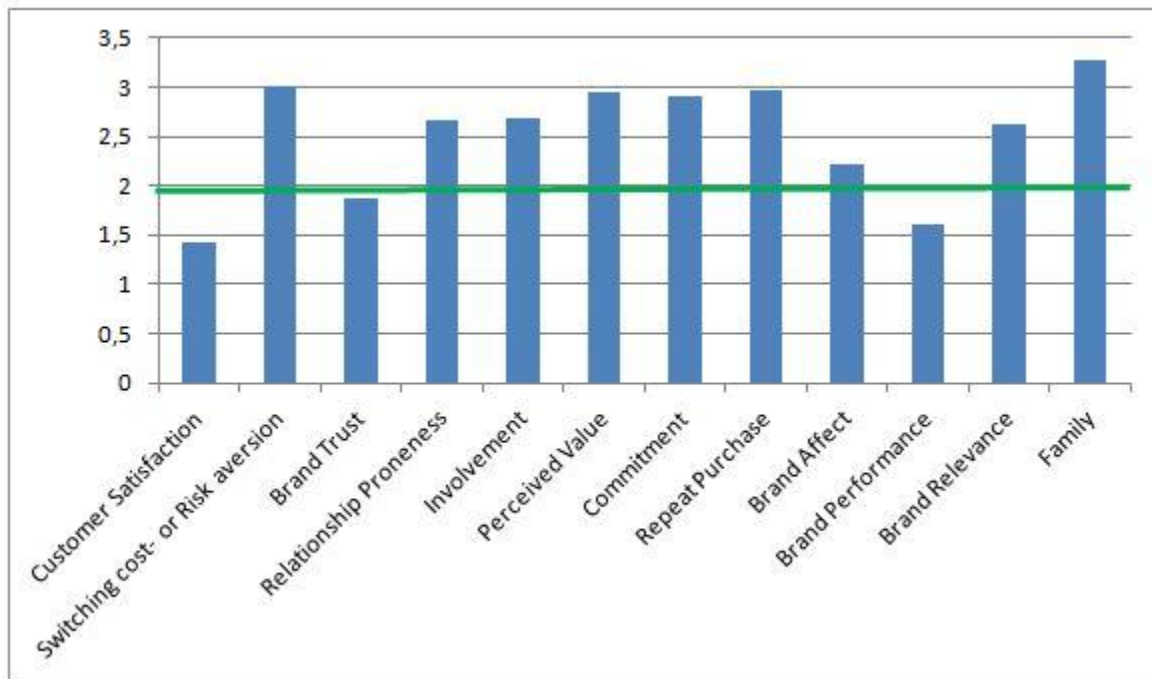

Figure 2: Brand loyalty influences

Customer satisfaction is the most important brand loyalty influence followed by *Brand performance* and *Brand trust*. In practice this means that a product brand has to perform well on the farm when applied to animals, instilling trust in the brand backed up by good customer service from the supplier. In combination these three factors form the foundation of brand loyalty in animal pharmaceutical products. None of the influences were regarded to be unimportant.

Resultantly is concluded that:

- *Agribusiness should address customer service (specifically advice) in their marketing efforts, ensure the brand they stock perform well and that these brands can be trusted by the farmers to*

enhance stock health and productivity. These brand loyalty issues focus on results and physical welfare of animal health.

The behavioural brand loyalty issues seem to be of lesser importance to farmers when they buy animal pharmaceutical products and should be a secondary marketing focus for agribusiness.

5.3. Reliability of the data

The data are regarded to be reliable as a satisfactory Cronbach alpha coefficient (0.713) was returned. The alpha coefficient, according to Field (2007:666) is a measure to determine if the data-set employed are reliable, thus meaning that the data can be used for analysis and that the results are useable and trustworthy. Alpha should exceed a coefficient of 0.70 to indicate satisfactory levels of reliability. *It is therefore concluded that the results obtained from the data are reliable and fit for use.*

6. Summary

The analysis of farmer buying behaviour in animal pharmaceutical products showed that farmers do not distinguish their behaviour between the different categories of health products. In addition, probably the most important finding was that farmers seek to buy products that perform well. They trust the specific product to rid the animals of pests, parasites or whatever the situation require, and contribute to the productivity of the herds. In addition, solid and informed service in the form of largely advice on the product and farming conditions are key in the selection of the products. It is important to note the agribusinesses act as extension to the manufacturer in this regard, and that agribusiness personnel should be well trained to provide this advice accurately. They should also be able to factor in changing agricultural conditions to recommend the correct product to the farmers. Naturally, the availability of products increases the level of customer satisfaction, and does provide a competitive advantage if the availability of stock is a focal area of an agribusiness. Farmer's days, Study group meetings, shows and promotions confirm the perception that suppliers and agribusinesses work together to ensure the availability and competitive pricing of pharmaceutical livestock products to commercial farmers.

7. References

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