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# Private labels for premium products: The example of organic food

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#### PRIVATE LABELS FOR PREMIUM PRODUCTS – THE EXAMPLE OF ORGANIC FOOD

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## PRIVATE LABELS FOR PREMIUM PRODUCTS – THE EXAMPLE OF ORGANIC FOOD

by

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## PRIVATE LABELS FOR PREMIUM PRODUCTS – THE EXAMPLE OF ORGANIC FOOD

#### Abstract:

This paper inquires into the tendency of German food retailers to market organic products as private-label products (PLs). After a review of the literature, we present preliminary results of a survey of retailers and processors. 62.5 % of the interviewed processors produce organic PL. Retailers sell organic PLs, because they care about "food safety", "retail as a brand" and "health", hoping to reach new customers. Requests for entry fees, investment grants and equipment allowances are less important for processors of organic PLs than for those not producing PLs. However, PL producers have to meet other conditions imposed by retailers.

Keywords: organic products, premium products, private label, retailing

#### 1 Introduction

Since the EU has introduced support for the conversion towards organic agriculture in the early 1990's, the supply of organic food has strongly increased. However, surveys based on consumer interviews show that there is an unsaturated potential of demand for organic products (ZMP, 2001). Furthermore, in Germany the demand for organic products continues to increase. Despite these trends and compared to other European countries, the share of organic products in food retailing remains very small in Germany. According to an estimation of the ITC (ITC, 2002) the share of turnover with organic products ranges between 1.7 - 2.2% of total food retailing for Germany and between 2.5 - 3.7% for Austria, Denmark and Switzerland. In light of these numbers, Hamm (1996) concludes that the market of organic products has a much greater potential than currently achieved.

Although general grocery stores are the most important shopping location for food for German consumers, the distribution of organic products by general food retailers remains minor (IFAV, 2001). Only 33 % of organic products are sold by general food retailing in Germany, while the major share is distributed by nature food stores (Hamm et al., 2002). The powerful position of food retailers can be a reason impeding the successful listing of organic products. Indeed, the concentration of German food retailing has been strongly increasing for years and the CR<sub>10</sub> has now reached 84 % (M+M Eurodata, 2003).<sup>1</sup> Because of this market power, retail players may reach favourable purchasing agreements and other strategic advantages in the negotiation with manufacturers and suppliers.

The increase in products marketed under private (retailer) labels is considered by economists as evidence for retailer's mounting buyer power (Wieser et al., 1999). Indeed, private labels (PLs) constitute a share of about 45 % of organic products sold in the German food retailing (BNN, 2003). This shows how important organic PLs have become for German food retailing. Most food retailers have developed their own organic PL. These organic private-label products – sold as premium products – can bear pro- or anti-competitive effects. On the one hand the large share of organic PLs can increase buyer power of food retailers. Retailers are able to exert pressure on their manufacturers to ensure that they receive products of the required quality and at the lowest possible price. On the other hand the organic food production sector is characterised by many small manufacturers. For small producers the production of organic PLs implicates lower (entrance) costs in particular by decreasing

<sup>&</sup>lt;sup>1</sup> CR<sub>10</sub> refers to the concentration ratio of the ten biggest firms.

transaction and marketing costs. Furthermore, PL goods do not have to compete for shelf-space, and producers do not have to pay slotting allowances.<sup>2</sup>

In the following section of the paper we will review general tendencies in the market for organic products. We then discuss in the third section the pro- and anti-competitive effects of PLs for premium goods such as organic products. These competitive impacts are considered in three categories, those impacting the retailer-supplier relationship, those affecting the horizontal competitive position among retailers and lastly those implying the consumer-retailer relationship. In the fourth section we present some preliminary results of an ongoing survey of organic food manufacturers and retail companies and their views on the relationship in manufacturing and marketing PL products. The paper concludes with a summary of the major findings of this research.

#### 2 Trends of Organic Products and PLs in Food Retailing

#### 2.1 Organic Products

The origin of the European organic movement dates back more than 50 years. However, it only was in the seventies that nature food stores expanded to commercial significance (Comber, 1998 cited in van der Grijp, den Hond, 1999). Since the late nineties, organic food is increasingly achieving mainstream status, especially in Western- and Northern-European countries. The highest market shares are found in Austria, Denmark, Germany, Sweden and Switzerland. This is partly due to high standards of living and strong environmental awareness in these countries. Responding to this shift in consumer demand, supermarkets and food multinationals are becoming increasing involved in the marketing of organic products. Focusing on a new segment of organic consumers, their growth rates in sales of organic products exceed those of traditional players such as nature food stores who remain focused on the traditional segment of organic food shoppers (van der Grijp, den Hond, 1999).

The introduction of organic products into mainstream retailing has drastically changed the patterns of distribution. Today, over 50% of organic products are sold by general food retailing in several European countries, such as Austria, Belgium, Denmark, Finland, Sweden, Switzerland, and the UK. In Germany, Italy and the Netherlands, however, nature food stores still have a dominating position (Comber, 1998 cited in van der Grijp, den Hond, 1999). In Germany only 33 % of organic products are distributed by general food retailing, whereas their share is 67 % for all foods. The bulk of organic food is still being sold by nature food stores (38 %), by direct sales and weekly markets (17 %), by bakers/butchers (7 %), and by

<sup>&</sup>lt;sup>2</sup> For more information about slotting allowances cp. Azzam, 2001.

restaurants and canteens (1 %) (Hamm et al., 2002). While the share in general retailing remains small, the turnover with organic products in general retailing has increased from 1997 to 2002 from 31 % to 33 % of all organic sales. According to Hamm et al. (2002) the turnover of organic products has increased from 2001 to 2002 from  $\notin$  2.7 billions to  $\notin$  3 billions corresponding to a share of 2.3 % of the total turnover in food retailing (SÖL, 2003).

Since the nineties, there have been several important developments that are changing the characteristics of the market. Some of the large European food retailers started to offer organic product lines (van der Grijp, den Hond, 1999). Food retailers became increasingly involved in the organic market and launched retailer brands specifically for organic products.

#### 2.2 Private Labels

Many different definitions of PLs exist in the scientific literature. Most often the term 'private label' is used as a pendant of the term 'brand' (Dumke, 1996). However, this paper bears on the following definition: PLs are product labels used by retailers to identify themselves as the owner of the brand (Bruhn, 2001).

For years German food retailing has found itself in a concentration process. Only some companies, mostly companies with big outlets or discounters, manage to increase their turnover. In 1999 the CR<sub>5</sub> of the German retailers reached 44.6 % of total turnover in food retailing (Metro-Group 11.9 %; REWE AG 10.8 %; Aldi-Group 8.7 %; Tengelmann 6.6 %; Asko-Group 6.6 %). Furthermore, the consulting group KPMG (2003) estimates that the CR<sub>5</sub> of the German food retailing will reach 82.2 % of total turnover in 2005. This suggests that strong competition is reigning the food retailing sector. By increasing its turnover, the market power of a given retailer will increase more than the market power of other competitors.<sup>3</sup> And by supplying PLs a retailer is able to increase its market power by fostering customer loyalty.

Considering the development of PLs over the years, we can observe a strong change in the strategic positioning of PLs. In the seventies, PLs have been brought into general food retailing in response to discount products. These private-label products were in general 'NoNames'. Their price is low and the quality is inferior to the quality of national brands (NB). These products are products of the 'low-interest' product group and consumers buy them because of their low price. Producers of these products generally are medium-sized companies.

<sup>&</sup>lt;sup>3</sup> A retailer has market power, if he is able to set the price above the price which would prevail under competition. The price under competition is usually taken to be marginal costs (Carlton, Perloff, 2000).

In the eighties, a new private-label product group came on the market – the 'Pseudobrands' or 'me-too' products. Pseudo-brands are low priced and the quality is not quite as good as that of NBs. Manufacturers are interested in producing this type of products either as a second product line ensuring full employment of their production capacity, or because they are specialised in the production of private-label products.

Since the nineties, retailers attempt to place themselves not only on the price level but also on the quality level using PLs. 'Umbrella brand names' or 'mono brands'<sup>4</sup> appeared on the German food market. These exclusive PLs are copies of NBs of the same or even of better quality compared to the market leading NB. Retailers use these products for image building and for customer binding. Bergès-Sennou et al. (2004) argue that PL products may even be due to retailer innovation, as in the case of chilled-ready-eat meals. They thus take advantage of new product differentiation to distinguish themselves from their competitors.

Considering these different generations of PLs, the following allocation can be found today in Germany: nearly 35 % of PLs are 'pseudo-brands', nearly 50 % of 'NoNames' and nearly 15 % of exclusive PLs (Dölle, 2001).

Private-label products have several characteristics of importance to manufacturers, retailers and consumers, and depending on the point of view the relative importance of these characteristics will differ. Most private-label products feature a good price-performance-ratio for consumers. Thus, consumers are able to substitute private-label products for high-priced NBs. Furthermore, private-label products complete the scale of available product variety. Cotterill and Samson (2002) conclude that price-conscious consumers switch to private-label products because their prices are lower than those of NBs. Although this seems to suggest that private-label products are of particular interest to price-sensitive consumers, consumers seem to be less sensitive to changes in the prize of private-label products once they have verified that the private-label product is always cheaper.

Private-label products give retailers the possibility to develop their own innovative products. Retailers can bind consumers by selling PLs and obtain herewith a more powerful position than their competitors. Manufacturers can reduce overcapacity by producing private-label products in addition to their own product line. Thus they are able to reduce the risk of not being able to sell their products. Overall, producers can enhance the producer-retailer-relationship (Bruhn, 2001).

<sup>&</sup>lt;sup>4</sup> 'Mono brand' means that retailers sell different product groups with different PLs.

#### 2.3 PLs in the Market for Organic Products

By offering goods that conform to the benefit perception of consumers, retailers can compete successfully with market leading brands. Therefore, it is important that retailers place premium PLs in the food market and not only 'NoNames' (Bruhn, 1996). In Germany organic PLs belong to the class of premium PLs and represent the attempt of retailers to develop such brands (Spiller, 2000). They have achieved a considerable market share (BNN, 2003). With 45 % market share manufacturers of PLs play an important role for most product categories.

Most food retailers have developed their own organic PL group. Some examples of organic premium PLs are 'Naturkind' by TENGELMANN, 'Füllhorn' by REWE AG, 'Grünes Land' by METRO, 'Bio-Wertkost' by EDEKA, 'BioBio' by PLUS and 'Terra pura' by GLOBUS. The first of these organic PLs were introduced in the retail market in the 1980's (Funck, 2001) and most of them are marketed under 'umbrella brand names'. Only 'Aldi'<sup>5</sup>, Germany's biggest discounter, markets organic products as 'mono brands' (Hanf, 2002). The segment of organic products shows a trend for selling high-priced products in Germany as PLs (Dumke, 1996). Table 1 shows the classes of goods marketed under German organic PLs.

Retailer	PL	Launch	'n		Clas	ses of g	oods		
			1	2	3	4	5	6	7
Tegut	Alnatura,	1985	х	х	Х		Х		
	tegutbio, kff-								
	bio, herzberg-								
	bäckerei								
Tengelmann	Naturkind	1986	х	х		Х	Х	Х	Х
Rewe-Gruppe	Füllhorn	1988	х	х	Х	Х	Х	Х	Х
Metro-Gruppe	Grünes Land	1996	х	х	х	х	х	х	
Globus	Terra Pura	1997	х	х		х	Х	Х	
Edeka-Gruppe	BioWertkost	1999	х	х	Х	Х	Х	Х	
Aldi-Gruppe (Süd)	-	-		х		Х			
Schwarz-Gruppe	-	-	-	-	-	-	-	-	-
Spar-Gruppe	Pro Natur	2001	х				Х	Х	
Dohle-Gruppe	Alnatura	2003	х						
Wal Mart	-	-	-	-	-	-	-	-	-
Norma	-	-	-	-	-	-	-	-	-
Bartels-Langness	-	-	-	-	-	-	-	-	-
Coop S-H	-	-	-	-	-	-	-	-	-
Plus (Tengelmann)	BioBio	2002	х			х			

1: nutriments (noodle, cereals, bread, staple food, sweets etc.); 2: fruits and vegetables; 3: meat, fish; 4: dairy products; 5: juices; 6: oil, fat, parfaits; 7: natural stimulants (chocolates, tee, beer etc.) Source: based on: Ziemann, Thomas, 2003; Klaffke, 2001.

<sup>&</sup>lt;sup>5</sup> only available at 'Aldi South'

The PL group 'Füllhorn' is the only PL covering all seven classes of goods: nutriments, fruits and vegetables, meat and fish, dairy products, juices, oil, fat and parfaits and natural stimulants. Most often the categories (3) meat and fish and (7) natural stimulants are not covered by private-label groups. All PL groups cover nutriments.

The large share of organic PLs may evidence the buyer power of food retailers. Marketing private-label organic products fosters the diffusion of organic products, wins customer loyalty, enhances independence from producers and strengthens group integration and the motivation of employees (Funck, 2001). In the following, the pro-competitive and anti-competitive effects of organic private-label products will be analyzed.

#### **3** Competitive Impacts of Private-label Organic Products

PLs alter the way in which manufacturers, retailers and consumers interact. They thus influence the competitive nature of the industry and the competitive position of its actors. Assessing the competitive impacts of private-label products is a complex task because they alter the interaction among actors along several dimensions. Table 2 presents a summary of impacts that have been discussed in the literature. We consider the impacts on three levels centred on the retailer as the link between manufacturers and consumers. On each level, impacts may be pro- or anti-competitive. In the following subchapters these effects will be described in relation to the market for organic products.

Relation from	Pro-competitive impacts	Anti-competitive impacts
Manufacturer - retailer	Low price at high quality; Improved supply chain management; Entry facilitation	Lost flexibility due to vertical integration
Retail	Higher margins/rates of return; Distinction from competitors; Price pressure	Turnover losses for conventional products
Retail - consumer	Diffusion of organic products; Customer loyalty	Low-cost imitations; PL as strategic weapon; Insufficient communication

Table 2. Pro- and Anti-competitive Impacts of Private-label Organic Products

#### 3.1 **Pro-competitive Impacts of Organic Private-label Products**

#### 1. Manufacturer – Retailer Relationship

From the consumers' perspective the principle benefit of private-label products is that the price most often undercuts the price of manufacturer brands. Retailers use organic PLs to enhance their retail brand image by offering good quality products.

While for the category of pseudo-brands, the quality is not likely as good as that of branded goods, this may not be true for high-quality PL products. In fact, there is increasing evidence that retailers are taking on their role as a quality leader, hence pressuring manufacturers and farmers into certain practices (Loader, Hobbs, 1999; Levidow, Bijman, 2002).

The pressure from private-label sales may stimulate further product development and innovation by branded manufacturers, thus increasing the product quality variety for consumers (Dumke, 1996; van der Grijp, den Hond, 1999; Dienel, 2001). PLs are thought to push for process innovation while NBs compete using product innovation (Traill, Meulenberg, 2002).

The search for suitable partners producing organic private-label products often proves difficult as the retail sector has defined quality measures that are not easily met by manufactures. This in particular is a problem for fruits and vegetables, because these products often lack quality or are subject to considerable quality variations (Dienel, 2001).

Entry barriers for new manufacturers result in higher prices and reduced output. Both these outcomes reduce consumer surplus and result in lower social welfare than if entry were easy. Existing firms can better realise cost-saving innovations or developments than new entrants without any experiences. If there are downward sloping cost curves incumbents may realise economies of scale not achievable by a new entrants initially producing small volumes (Dobson, 1998). Advertising also can form an entry barrier. Brand loyalty can be stimulated by extensive marketing, both making consumers more price inelastic and increasing their psychological switching costs. Advertising also can infer an image of quality on brands that makes them preferable to new products that are not associated to this positive quality signal. Other entry barriers can be the access to shelf space or/and the payment of slotting allowances (Dobson, 1998).

Organic PL production can lessen these entry barriers and provide a useful alternative entry route to manufacturers before they launch their own-branded product. Thereby they may be able to gain valuable experience and knowledge. Production techniques can be refined and low-cost processes can be developed. PL production may generate valuable cost savings. The retailer takes on the responsibility for marketing PL goods. This reduces the start-up costs for new entrants. PL goods do not have to compete for shelf-space, and producers do not have to pay slotting allowances (Dobson, 1998). Finally, the threat of further branded entry may also place additional pressure on existing brands, hence reducing their market power.

Organic PLs can facilitate the linkage between producers and retailers and improve the efficiency of the supply chain. The number of agents which are involved in the production/ distribution chain can be reduced by a direct contract between retailers and organic producers (Dobson, 1998). The buying markets are secured by long term contractual obligation. So far, the supply of organic products in the German food retailing still is fairly restrained. A range of organic products only consisting of branded products may bring about the danger that retailers are too dependent on single producers<sup>6</sup> (Funck, 2001).

#### 2. Retail Level

Retailers get higher margins selling organic products than selling conventional products (Spiller, 2001). Furthermore, the margins can be much higher by selling organic PLs than by selling comparable branded organic products, because of the increased price pressure that retailers exert on producers (Dienel, 2001). Secondly, organic PLs lead to higher rates of return. At the moment, the rate of return of German food retailing approaches 1 %. In contrast to this, in the UK – with a high share of PLs – retailing achieves rates of return of 3-5 %, sometimes even 6-7 % (Dienel, 2001). Thirdly, by establishing organic PLs, retailers place themselves as 'premium retailers' in the food market. In this way they can distinguish themselves and stand out from their competitors (Dienel, 2001).

Private-label organic products in German general food retailing are cheaper than organic products in nature food stores. Very cheap PL products may be seen as the major retailers' competitive response to the discount stores. This can put new pressure on prices and lead to branded products offered at lower prices<sup>7</sup>.

#### 3. Retail – Customer Relationship

General food retailing promotes the diffusion of organic products. Thus, retailers appear as 'organic diffusion agents' (Kull, 1998). Retailers obtain competitive advantages in

<sup>&</sup>lt;sup>6</sup> For example 'HIPP' baby food is a very dominant brand of organic products in German food retailing.

<sup>&</sup>lt;sup>7</sup> However empirical analyses of PLs (not especially organic PLs) suggest that the price of NBs rise if the market share of PLs increases (cp. Staahl Gabrielsen et al., 2001;Ward et al., 2002).

comparison to their competitors by selling organic private-label products at a lower price than branded organic products. By this, they improve customer binding (Funck, 2001).

The establishment of organic products as products of high quality and safety can lead to an image advantage for retailers (Dienel, 2001). According to a survey of the *Food Economy* the topics 'food safety' and 'the retail as a mark' rank among the most important topics in 2002.

Furthermore, retailers can bind new customer groups such as health-conscious consumer and consumers interested in environmental protection. These buying motives have become more important during the last years (Schade, 1997).

#### 3.2 Anti-competitive Impacts of Organic Private-label Products

#### 1. Manufacturer – Retailer Relationship

Retailers can normally choose from a number of potential suppliers. Thus retailers are able to exert pressure on their manufacturers to ensure that the products they receive are of the required quality and of the lowest possible price. This increases the margins of their PL products (Dobson, 1998). It is a special focus of discounters who compete at low prices. Their involvement in the organic food industry will erode farmers' and producers' margins. Retail prices of organic foods fell significantly in 2002 and a continuation of this trend will make the industry increasingly unprofitable for farmers and manufacturers (Organic Monitor, 2003a).

Furthermore, increasing production in the face of limited marketing channels may put downward pressure on prices. Lower prices will hurt farmers' margins and may discourage farmers from converting to organic agriculture (Organic Monitor, 2003b). This will result in a small number of potential suppliers.

The food retailing sector needs non-varying supplier structures for the diffusion of organic PLs throughout Germany. Food retailers want efficient suppliers which can react elastically to short term quantities changes (Dienel, 2001). But most producers of organic products are small manufacturers or organized in small organisations. Therefore, the existing supplier structures are in parts not suitable for the conditions demanded by retailers. To a large extent, the existing marketing structure of producers is inadequate for marketing using wholesale. Most manufacturers produce in small quantities, while retailers need big assortments. Because procuring from a single producer enables retailers to lower their transaction costs (Dienel, 2001), only few producers may be entering the production of organic PLs.

#### 2. Retail Level

By expanding the number of organic PLs with a wide assortment, consumers can more easily substitute conventional products by organic products. That means the launch of an organic PL leads not implicitly to a turnover increase. The increase in turnover for organic products will be bought at the expense of turnover losses for conventional products (Dienel, 2001).

#### 3. Retail – Customer Relationship

If organic PL products are very similar in packaging to branded products, uninformed or inattentive consumers might mix up the products and purchase the PL by mistake or by thinking that the goods are identical and made by the same manufacturer. Branded goods have an image of quality, performance or even lifestyle. By putting PL products in similar packaging retailers hope to become associated with this brand image. In the short term the imitation of branded products may be beneficial to the consumer. They purchase a product on the same development level as the branded product but pay a lower price. However, if retailers swiftly introduce brand imitations, manufacturers may reduce the level of investment or continue to develop new aspects to products more quickly. This can be detrimental to consumers in the long term (Dobson, 1998).

If a retailer is able to generate brand loyalty to its store brands, store loyalty is also increased. Mostly, consumers visit stores to purchase a wide variety of products, not just a single branded good. The greater the store loyalty, the less likely consumers will switch stores in search for any particular brand or in response to price promotions or stock-outs in other stores. In the case of insufficient supply of the consumers' usual brand, the switching costs of the consumers will be so high that he would prefer to purchase a secondary brand or PL product (Dobson, 1998). Demand for branded products will be reduced as a result, and their unit cost will increase. Small retailers not engaging in a PL programme, however, can only carry NBs. This worsens their competitive situation and increases the oligopoly structure of the market (Wieser et al., 1999).

A big share of organic products is sold as PLs. This bears out a low rate of advertising for organic products. In Germany, only the food retailing group 'REWE AG' does advertise its organic PLs. Thereby, consumers lack information. In Germany most consumers are informed about organic products by organisations or the Federal Ministry of Consumer Protection, Food and Agriculture. They finance an extensive advertising campaign for the 'Ökosiegel', the German labelling for organic products, which are produced according to EU guidelines.

#### **4** Survey and Empirical Results

To analyse the relation between the general food retailing and the organic manufacturing industry with regard to the impact of private organic labels we currently are conducting a survey among organic food manufacturers and general food retailers in Germany. Because we are mostly interested in the relationship between manufacturers and retailers, we excluded producers of unprocessed products on purpose. The survey was conducted online from January to April 2004. Companies were contacted by email or phone and the link to the web interface of the questionnaire was sent to 411 manufacturers and to 50 general retailers.<sup>8</sup> By the end of April, 70 companies of the organic industry (18 % response rate) and 13 general food retailers (26 % response rate) have filled in the questionnaire.

#### 4.1 Company Characteristics

We asked the person in the retail company who is responsible for purchases of organic food to fill in the questionnaire. In the processing industry we contacted the sales managers. The dataset consists of companies of all sub sectors of the organic food industry. It covers the 15 German federal states and all size categories of companies. The majority of respondents belongs to the group of meat processors, the dairy sector, bakery and pasta products sector, the mill sector and juice producers. A small number of companies come from the distillery sector, fish processing and soft drink production. Most of the respondents are small-sized companies (mean turnover: 1-5 Mill. Euro)<sup>9</sup>. The average number of employees amounts to 319.

#### 4.2 Perceptions of Market Development by Processors and Retailers

Comparing the assessment of future market developments among retailers and processors in table 3, one easily realises that processors appear to be more optimistic than retailers. Retailers seem to be fairly divided on the issue, 30% being rather pessimistic about the development perspective as far as sales of organic food in general or their sales in general retailing are concerned. On the other hand, 50% of retailers indicate to plan on increasing sales of organic PLs.

<sup>&</sup>lt;sup>8</sup> Companies who preferred to fill in the survey on paper perceived a paper version by postal mail or fax.

 $<sup>^{9}</sup>$  < 5 Mill. Euro p. a. turnover: small-sized company; 5 – 50 Mill. Euro p. a. turnover: medium-sized company; > 50 Mill. Euro p. a. big company (Neumann, 2003).

	Agree (1)	(2)	(3)	(4)	Don't agree (5)
The total sales of organic foods w	vill increase ov	er the comi	ing years.		
Retail (μ=3.0, σ=1.155)	10 %	20 %	40 %	20 %	10 %
Processors (μ=2.66, σ=0.959)	10.7 %	33.9 %	35.7 %	17.9 %	1.8 %
The sales of organic foods in gen	eral food retail	ing will inc	crease over th	e coming y	ears.
Retail (μ=3.3, σ=0.949)	0 %	20 %	40 %	30 %	10 %
Processors (μ=2.21, σ=1.039)	30.4 %	32.1 %	23.2 %	14.3 %	0 %
Retail: Our firm intends to increa	se sales of org	anic PLs.			
(μ=2.88, σ=1.356)	12.5 %	37.5 %	12.5 %	25 %	12.5 %
Processors: Our firm intends to in	ncrease sales vi	ia general f	ood retailing.		
(μ=2.89, σ=1.343)	18.2 %	25.5 %	20.0 %	21.8 %	14.5 %

Table 3. Perceptions on Market Development by Processors and Retailers

Processors are more optimistic. Only about 20% of them are of the opinion that the sales will not increase in the coming years. They are equally optimistic about the sales development in general retailing: 62.5% expect increasing sales. Most producers hope to increase their sales via general food retailing in coming years.

#### 4.3 Production of Organic Private Labels

Most manufacturing companies produce organic NBs. More than half the companies produce also organic PLs. And about half the companies also manufacture non-organic products (table 4).

	Production organic NBs	Production organic PLs	Production conventional products		
	Share of companies in percent				
Yes	94.3 %	64.3 %	52.9 %		
No	5.7 %	35.7 %	47.1 %		

Table 4. Production of Organic NBs and PLs

For 50.0 % of the processors in our survey, turnover comes to more than 75% from sales of organic products. About a third (31.7 %) is mainly producing conventional products and their turnover from organic sales is only 1-15 % (table 5).

Turnover of organic products as share of processor's total turnover	Share of processors (%)
1-15 %	31.7 %
16-30 %	5.0 %
31-45 %	6.7 %
46-60 %	3.3 %
61-75 %	3.3 %
76-100 %	50.0 %
Total	100 %

Table 5. Revenue from Organic Products

Table 6. Turnover with Organic PLs

<i>Turnover of organic PLs as share of processor's</i> <i>turnover with organic products</i>	Share of processors (%)
0 %	14.3 %
1-15 %	26.2 %
16-30 %	11.9 %
31-45 %	4.8 %
46-60 %	14.3 %
61-75 %	7.1 %
76-100 %	21.4 %
Total	100 %

For nearly a third of the processors the production of PLs is quite important and constitutes more than 60% of turnover with organic products. However, for about 40 % of the processors, sales of organic PL products is of minor importance and creates less than 15% of turnover (table 6).

The retailers for whom the processors produce PLs are shown in table 7. Most often mentioned are the Edeka-Group and Rewe-Group, followed by Tegut and Tengelmann. Bartels-Langness and Coop S-H were named only once.

Number of Processors producing for under	$PL^{10}$	$NB^{10}$
Aldi-Group	0	1
Bartels-Langness	1	4
Coop S-H	1	5
Dohle-Group	0	5
Edeka-Group	8	15
Globus	0	8
Metro-Group	2	7
Norma	2	0
Rewe-Group	8	7
Schwarz-Group	2	7
Spar-Group	2	7
Tegut	7	8
Tengelmann	4	1
Wal Mart	0	2
other (Coop Switzerland, Karstadt, Konsum	6	15
etc.)		

Table 7. Number of Companies Producing for Different Retail Outlets

The importance of the most often mentioned retailers mirrors their importance in the market for organic PLs in Germany (see table 1). The Rewe-group markets organic PL products in seven different product categories, Edeka and Tegelmann in six.

<sup>&</sup>lt;sup>10</sup> The number of PLs and NBs do not add up to number of questioned manufacturers as some produce for more than one retailer.

#### 4.4 Organic Products in Retailing

87.5 % of the surveyed retailers sell organic NBs, 62.5 % also organic PL products. The organic products belong to the classes of goods as indicated in table 8:

Retailer		C	lasse	es of go	ods	-NB	5		C	Classes	of god	ods – P	PLs	
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
1	Х	Х	-	Х	Х	Х	Х	Х	-	-	-	Х	Х	Х
2	-	Х	-	Х	-	-	-	Х	Х	Х	Х	Х	Х	-
3 (missing values)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Х	Х	-	Х	Х	Х	Х	Х	Х	-	Х	Х	Х	Х
5	-	Х	-	Х	Х	-	Х	-	-	-	Х	Х	-	-
6	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
7	Х	Х	-	Х	Х	Х	Х	-	-	-	-	-	-	-
8	Х	Х	-	Х	-	Х	Х	-	-	-	-	-	-	-
9	Х	Х	-	Х	Х	Х	Х	-	-	-	-	-	-	-
10 (markets PL, no	-	-	-	-	-	-	-							
product classes														
specification)														
11	Х	Х	-	Х	-	-	-	-	-	-	-	-	-	-
12	-	Х	-	Х	-	Х	-	Х	Х	Х	Х	Х	Х	Х
13	Х	Х	Х	Х	Х	Х	Х	-	-	-	-	-	-	-

Table 8. Retailers' Sales of PLs and NBs

1: nutriments (noodle, cereals, bread, staple food, sweets etc.); 2: fruits and vegetables; 3: meat, fish; 4: dairy products; 5: juices; 6: oil, fat, parfaits; 7: natural stimulants (chocolates, tee, beer etc.)

The organic NBs show a wider product range for most retailers than the organic PLs. Still, organic PLs exist by now in all product groups. Only one retailer markets organic products in all product groups both as PLs and NBs.

The total turnover with organic NBs is on average 63 % and that of organic PL of 37 % (St. deviation= 36.7). This resembles nearly the national average.<sup>11</sup> However, there are important differences among the different retail companies. Some retailers only sell organic foods as NBs, some sell about 50% as PLs and 50 % as NBs and other make 20% of their turnover of organic products with NBs and 80% with organic PLs.

#### 4.5 Organic PLs as a Retailing Strategy

Retailers can follow different strategies by producing organic private-label products. Premium organic PLs are copies of NBs of the same or even of better quality compared to the market leading NB. Retailers use these products for image building and for customer binding (Dienel, 2001).

<sup>&</sup>lt;sup>11</sup> It is estimated that 55% of organic foods in general retail stores are sold under NBs, while 45% are sold as PL products (BNN, 2003).

For one, retailers can try to improve upon their image by selling organic products under their own brands. This motive is apparent in the results of our survey (meanvalue 2.14) (table 9). Consumers can buy PL products in those grocery stores that belong to the retail chain producing these PL brands. In addition, PL products increase the contractual obligation manufacturers have vis-à-vis retailers and thus increase the control of quality and production methods (Dobson, 1998). However, among the surveyed retailers, only few tend to agree to this statement (meanvalue 3.29).

Agreement to the following statements:	Mean	Std. Deviation
$1 = fully agree \dots 5 = do not agree at all$		
We hope to improve the image of our chain by selling organic PL.	2.14	1.345
By producing organic PL, we can assure consumers better quality control than using organic NB.	3.29	1.11
Organic PL foster more process innovation among processors than organic NB.	3.14	0.90
Organic PL allow for higher margins and rates of return than conventional PL products.	2.14	0.90
By marketing organic PL products we seek to distinguish ourselves from our competitors.	2	0.82
By marketing organic PL we follow our competitors.	2.71	1.25
The supply of organic PL products facilitates collaboration with processors and increases the efficiency within the production chain.	2.5	1.05
The marketing of organic products give us the image of a premium retailer.	3.14	1.46
We sell organic PL products, because we very much care about issues of "food safety:, "retail as a brand" and "health".	2.00	1.16
By selling organic PL we hope to reach new customers and bind them to our company.	2.14	1.07
We follow other European countries such as Denmark, Austria or Switzerland when designing our programme of organic products	4.43	0.54

Table 9. Retailers' Strategies in Marketing Organic Private-label Products

Another argument for producing PL is that PL products foster process innovation among processors. Competition among PL manufacturers is more on quality leadership or product differentiation and less on cost leadership and process control (Dumke, 1996; van der Grijp, den Hond, 1999; Dienel, 2001). Only a few retailers tend to agree with the statement that production of PLs fosters process innovation (meanvalue 3.14). By using PLs, the respondent retailers can realize higher margins than with nationally branded products (meanvalue 2.14).

Competition among retailers in Germany is very high, given a  $CR_{10}$  of 85 % (M+M Eurodata, 2000). Marketing of organic PLs can help to differentiate retail chains and thus alleviate the strength of price competition by concentrating on differentiation strategies (Bergés-Sennou et al., 2004). We measure a meanvalue of 2.00. Producing organic PLs can also increase the efficiency of marketing (meanvalue 2.5).

Retailers can distinguish themselves as premium product traders because organic products are considered being of superior quality and are offered at a higher price. However, only few of the surveyed retailers believe that they obtain the image of a premium retailer by selling organic PLs (meanvalue 3.14). Health and food safety are issues of great concern in food retailing and organic products are counted among the group of goods with a higher credence value. In times of low consumer confidence due to a series of food scandals, retailers can restore consumer trust and preserve customer loyalty by using organic PL products thus demonstrating that the chain cares about the safety and health of their customers. The surveyed retailers care about issues of "food safety", "retail as a brand" and "health" (meanvalue 2.00) and try to reach and bind new customers by selling organic PLs (meanvalue 2.14).

#### 4.6 The Competitive Impact of Organic PLs

The production of PLs allows companies to sell their products to general food retailers and thus enables them to overcome entry barriers (Dobson, 1998). In consequence, by establishing linkages to the retail industry, it facilitates access of their nationally branded products (sort of economies of scope in food marketing). The results of our survey presented in table 10 show that producers of PL products are marginally more satisfied with their degree of market coverage, but this difference is not significant. In addition, their degree of dependence on few customers/retailers and their relative loss due to marketing and slotting concessions is about the same.

		Mean	St. deviation
Satisfaction with Market Coverage <sup>1</sup>	Producing PL	2.92	1.100
	Not producing PL	3.32	0.820
Degree of Dependence from few Customers (Retailers) <sup>2</sup>	Producing PL	2.95	1.131
	Not producing PL	3.43	1.089
Percentage Revenue Loss due to Marketing Concessions <sup>3</sup>	Producing PL	2.95	1.131
	Not producing PL	3.37	1.165
Scale: <sup>1,2</sup> (1) very high (2) high (3) medium (4 <sup>3</sup> (1) 0-5% (2) 6-10% (3) 11-15% (4) 16-20% >40%	· · · ·	% (7) 31-35% (8) 3	36-40% (9)

Table 10. Degree of Market Coverage and Competitiveness of Processors of PL and NBs

On the other hand, producers are becoming more dependent on retailers when producing PL products, because PL producer have to concede to price, quality and quantity demands by retailers. However, neither producers of PL production nor of NBs are perceiving very strongly their dependence on few main customers. This is probably due to the fact that processors in our survey were on average delivering only 32 % of their total sales to their most important customer/retailer.

The theoretical literature on PL products seems to suggest that concessions by processors and producers of PLs are not as important as for NB products (Azzam, 2001; Dölle, 2001). Our results presented in table 11, however, show a wide divergence in this assessment. Only entry fees, investment grants and order charge fees are perceived as being less important by processors of organic PL producers. On other issues, processors of PL have to meet more requests than processors of NB.

Table 11. Requests that Processors have to Meet for Successful Placement of their Products in
Retailing

Percent of processors agreeing to the following statements: Request that processors have to meet	Processors for organic PLs	Processors for organic NBs
Entry fees	24.2 %	28.6 %
Shelf fees	15.6 %	7.1 %
Advertising	66.7 %	50.0 %
Shelf care	16.1 %	15.4 %
Price marking	16.1 %	8.3 %
Inventory help	0.0~%	0.0~%
Cheap credits	6.5 %	0.0 %
Investment grants	3.1 %	8.3 %
Equipment allowances	16.1 %	8.3 %
Order charge fees	19.4 %	33.3 %
Store employees	0.0 %	0.0 %

The literature also suggests that retailers are facing difficulties in finding producers for certain types of products, such as fruit and vegetables (Dienel, 2001). Our results on this issue are shown in table 12. While we cannot discern particular difficulties when looking at averages, it appears that e.g. for fruit and vegetables, non-alcoholic beverages and meat and fish, some retailers perceive it as an important problem.

Statement: Finding suppliers for the following product categories is difficult:	Mean	Std. Deviation	Minimum	Maximum
Nutriments	4.14	0.69	3	5
Fruits and Vegetables	3.71	1.60	1	5
Dairy Products	3.86	1.07	2	5
Fish and Meat	3.33	1.51	2	5
Carbonated Soft Drinks	3.00	1.10	2	4
Fruit juices and drinks	3.50	1.26	2	5
Alcoholic drinks	3.33	0.82	2	4
Oil, fat, parfaits	4.00	0.82	3	5
Bakery products and long life bakery products	3.43	1.13	2	5
Pasta	4.14	0.38	4	5
Coffee and Tea	3.57	0.98	2	5
Cereals and cereal products	4.14	0.38	4	5
Scale: (1) fully agree (5) do not agree at	all			

Table 12. Difficulties in Finding Suppliers of Organic Products

#### 5 Conclusion

This paper analyses the impact of the organic PLs in general food retailing. Organic PLs belong to the class of premium PLs. They are copies of NBs of the same or even of better quality. Organic PLs constitute a remarkable market share of 45 % of the organic products distributed by food retailers in Germany. Most German food retailers have developed their own organic private-label group. The increase in products marketed under private (retailer) labels is considered by economists as evidence for retailer's mounting buyer power. This also applies to premium PLs like organic PLs. Because of buying power retailers are able to exert pressure on their manufacturers to ensure that they receive products for image building and for customer binding. On the other hand organic PLs can lead to pro-competitive impacts. The organic food production sector is characterised by many small manufacturers. For small producers the production of organic PLs implies lower costs in particular by decreasing transaction and marketing costs.

The preliminary results of a survey among organic food manufacturers and general food retailers in Germany show that nearly half the processors produce organic PLs. 62.5 % of the surveyed retailers sell organic PLs.

Retailers can follow different strategies selling their own organic PLs. Retailers hope to improve their image and some feel confident that organic PLs give them the image of a premium retailer. Retailers obtain higher margins and rates of return. Competition among retailers in Germany is very high. Thus, private organic labels allow retailers to distinguish

themselves from their competitors. The surveyed retailers sell organic PLs because they care about issues of "food safety", "retail as a brand" and "health". They hope to reach and bind new customers.

The surveyed processors of PLs are marginally more satisfied with their degree of market coverage and feel only marginally more dependent from few retailers than companies producing only organic NBs. Both processors of organic PLs and processors producing only organic NBs have to meet requirement imposed by retailers. While entry fees, investment grants and equipment allowances seem to be less important for processors of PLs, they have to fulfill a range of other concessions just as the producers of NB products. This appears to contradict the theoretical literature that claims that PL products do not have to compete for shelf-space and producers do not have to pay slotting allowances. Overall it seems that PLs in the organic food sector has not achieved importance necessary to pose an undueful competitive burden on organic manufacturers.

#### References

Azzam, A. M. (2001), "Slotting Allowances and Price-Cost Margins: A Note", *Agribusiness* vol. 17 no. 3, pp. 417-422.

BNN (2003), *Trendbericht – Die Naturkostbranche zwischen Nitrofen und BSE. Zahlen und Fakten 2002*, http://62.112.68.138/input/pdf/Trendbericht.pdf, date: 05.02.2003.

Bruhn, M (1996), "Bedeutung der Handelsmarke im Markenwettbewerb – eine Einführung in den Sammelband" in Bruhn, M. (ed.), *Handelsmarken. Entwicklungstendenzen und Perspektiven der Handelsmarkenpolitik*, Schaeffer-Poeschel (u.a.), Stuttgart, pp. 3-35.

Bruhn, M. (2001), "Bedeutung der Handelsmarke im Markenwettbewerb – eine Einführung" in Bruhn, M. (ed.), *Handelsmarken. Entwicklungstendenzen und Perspektiven der Handelsmarkenpolitik*, 3. edition, Schaeffer-Poeschel (u.a.), Stuttgart, pp. 3-48.

Bergés-Sennou, F., Bontems, P. and Réquillart, V. (2004), "Economics of Private Labels: A Survey of Literature", *Journal of Agricultural & Food Industrial Organization* vol. 2 no. 3.

Carlton, D. W., Perloff, J. M. (2000), *Modern Industrial Organization* 3. edition, Addison-Wesley, Reading, Mass. (u.a.), pp. 610-611.

Comber, L.R. (1998), *The European Organic Foods Market*, Leatherhead Food RA, Leatherhead.

Cotterill, R. W., Samson, P. O. (2002), "Estimating a Brand-Level Demand System for American Cheese Products to Evaluate Unilateral and Coordinated Market Power Strategies", *American Journal of Agricultural Economics*, vol. 84 no. 3, pp. 817-823.

Dienel, W. (2001), "Organisationsprobleme im Ökomarketing – eine transaktionskostentheoretische Analyse im Absatzkanal konventioneller Lebensmittel" in

Schriftenreihe des Bundesministeriums für Verbraucherschutz, Ernährung und Landwirtschaft, Reihe A: Angewandte Wissenschaft, Band 490, Münster.

Dobson, P. W. (1998), *The economic welfare implications of own label goods*, Nottingham.

Dölle, V. (2001), "Konzepte und Positionierung der Handelsmarken – dargestellt an ausgewählten Beispielen" in Bruhn, M. (ed.), *Handelsmarken. Entwicklungstendenzen und Perspektiven der Handelsmarkenpolitik* 3. edition, Schaeffer-Poeschel (u.a.), Stuttgart, pp. 131-145.

Dumke, S. (1996), *Handelsmarken-Management*, S + W Steuer- und Wirtschaftsverlag, Hamburg.

Funck, D. (2001), "Ökologische Eigenmarken im Handel" in Bruhn, M. (ed.), *Handelsmarken. Entwicklungstendenzen und Perspektiven der Handelsmarkenpolitik* 3.
edition, Schaeffer-Poeschel (u.a.), Stuttgart, pp. 147-164.

Hamm, U. (1996), "Vermarktungsprobleme und Lösungsansätze", *Ökologie und Landbau*, vol. 100 no. 4, pp. 30-33.

Hamm, U., Gronefeld, F., Halpin, D. (2002), *Analysis of the European market for organic food. Organic Marketing Initiatives and Rural Development (OMIaRD) Volume 1*, University of Wales, Aberystwyth, United Kingdom.

Hanf, J. (2002), *Handelsmarken. Ein strategisches Instrument zur Positionierung und Imagebildung eines Lebensmittelhändlers*, Presentation at the 42<sup>nd</sup> meeting of the 'Gesellschaft für Wirtschafts- und Sozialwissenschaften des Landbaues e.V.'' during 30.09.2002 and 02.10.2002 in Halle (Saale).

IFAV (2001), Verbraucherverhalten beim Lebensmittelkauf, Köln.

ITC (2002), Overview world markets for Organic Food & Beverages (forecast) (2002). http://www.intracen.org/mds/sectors/organic/welcome.htm, date: 18.02.2003. Klaffke, K. (2001), Ökolebensmittel im Einzelhandel, Report, Institut für Markt-Umwelt-Gesellschaft e.V. (imug).

http://orgprints.org/00000825/01/klaffke-k-oekolebensmittel-einzelhandel-2001.pdf, date: 16.03.2004

Kull, S. (1998), Ökologieorientiertes Handelsmarketing: Grundlegungen, konzeptuale Ausformungen und empirische Einsichten, Lang, Frankfurt am Main.

KPMG (2002), Trends im Handel 2005. Ein Ausblick f
ür die Branchen Food,
Fashion&Footware (2003).
http://www.kpmg.de/library/surveys/satellit/Trends\_im\_Handel4.pdf, date: 3.6.2003.

Levidow, L., Bijman J. (2002), "Farm Inputs under Pressure from the European Food Industry", *Food Policy*, vol. 27 no. 1, pp. 31-45.

Loader, R. Hobbs, J. E. (1999), "Strategic Responses to Food Safety Legislation", *Food Policy*, vol. 24 no. 6, pp. 685-706.

M+M EURODATA (2000), *Konzentration im deutschen Lebensmitteleinzelhandel*. News item 31.10.2000. http://www.mm-eurodata.de/presse/00103102.html, date: 26.05.2003.

M+M EURODATA (2003), *Top 30 des Lebensmittelhandels 2002 nach Gesamt-Umsätzen*. News item 21.03.2003. http://www.mm-eurodata.de/presse/Top30\_GesamtUmsatz\_2002.pdf, date: 26.05.2003.

Neumann, G. (2003), Ursachen, Motive und Auswirkungen von Unternehmenszusammenschlüssen. Eine empirische Analyse des produzierenden Gewerbes in Deutschland unter besonderer Berücksichtigung der Ernährungsindustrie, Dissertation, University Kiel, dissertation.de - Verlag im Internet GmbH.

ORGANIC MONITOR (2003a), *Challenges facing Künast in organic food industry*. Research news (2003). http://www.organicmonitor.com, date: 16.06.2003.

ORGANIC MONITOR (2003b), *Raising production is not the sole answer to developing German organic food industry*.http://www.organicmonitor.com/r1203.htm#a1, date: 16.06.2003.

Schade, G. (1997), "Markenbildung bei Lebensmitteln im Europa der Regionen" in Wirtschafts- und Sozialwissenschaftliche Fachgebiete der Landwirtschaftlich-Gärtnerischen Fakultät der Humboldt Universität zu Berlin (ed.): *Forschung und Praxis im Agrarmarketing*, Working Paper No. 40, pp. 35-41.

SÖL (2003), Ökolandbau in Deutschland 2002. Der Markt für Bioprodukte. Entwicklung im Jahr 2002.. http://www.soel.de/oekolandbau/deutschland\_ueber.html#51, date: 19.02.2003.

Spiller, A. (2000), "Erfolgschancen mittelständischer Hersteller als
Handelsmarkenspezialisten: Eine institutionenökonomische Analyse" in Meyer, J.-A.
(ed..) Jahrbuch der KMU-Forschung 2000. Marketing in kleineren und mittleren
Unternehmen, München, pp. 391-412.

Spiller, A. (2001), "Preispolitik für ökologische Lebensmittel: Eine neoinstitutionalistische Analyse" *Agrarwirtschaft*, vol. 50 no. 7, pp. 451-461.

Staahl Gabrielsen, T., Stehen, F., Sorgard, L. (2001), *Private Label Entry as a Competitive Force?* Presented at the Annual Conference of the European Association for Research in Industrial Economics 2002, http://www.fundacion.uc3m.es/earie2002/papers/paper\_180\_20020315.pdf, date: 28.03.2003.

Traill, W. B., Meulenberg, M. (2002), "Innovation in the Food Industry" *Agribusiness*, vol. 18 no. 1, pp. 1-21.

Van der Grijp, N. M., den Hond, F. (1999), *Green supply chain initiatives in the European food and retailing industry*, Institute for Environmental Studies, Amsterdam.

Ward, M. B., Shimshack, J. P., Perloff J. M., Harris, J. M. (2002), "Effects of the Private-Label Invasion in Food Industries" *American Journal of Agricultural Economics*, vol. 11, pp. 961-973.

Wieser, R., Aiginger, K., Wüger, M. (1999), *Marktmacht im Einzelhandel*, WIFO, October, Wien.

Ziemann, M., Thomas S. (2003), "Wer kauft Bio-Handelsmarken?" *Ernährungs-Umschau*, vol. 6, pp. B21-B24.

ZMP (2001), Einstellungen und Käuferprofile bei Biolebensmitteln, ZMP, Bonn.