

Alvar Pet Sustainability Report

2021



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ALVAR



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ALVAR

* ALVARIN NAPPULA HÄRKÄPAVULLA & KAURALLA
2kg

Ravintosisältö per 100 g

371	kcal energiaa
23%	proteiinia
15%	rasvaa
4.3%	raakakuitua

* Sikeässä täydennetty kaikki koiran päivittäisille tarvitsemat vitamiinit ja kivennäisaineet.

Kartonki-
kayttö-
ohje



Tuotteen
pakkaus-
materiaali

Tuotteen
pakkaus-
materiaali

Tuotteen
pakkaus-
materiaali

Editor's notes

When we started drafting our very first sustainability report a bit over a year ago, it was hard to picture where we would be today. Writing Alvar's first ever sustainability report was both an exciting and intimidating experience, because we wanted it to be as transparent as possible although knowing we still had so much to do.

2021 was our first whole year and we are excited to tell you that we have managed to make huge improvements and we can finally lay it out in black and white.

The number of dogs registered in Finland grew 8% from 2020 to 2021. This shows that the growth of the industry is still ongoing, while the pet food consumption trends are growing in a direction that is worrying from a sustainability point of view. With all the human-grade, raw and organic pet food trends out there, it can be easily confused what really is sustainable.

By switching to Alvar, we have cut down Brina's carbon paw print by 88%. This is why

we here at Alvar believe that by offering more conscious alternatives and research based information accessible to everyone, we can make a difference.

In 2021, we opened new markets in Germany, brought 14 new products to our selection, calculated the CO₂ paw print of all our products and have managed to bring together an amazing Alvarist community to share our journey with, and we are grateful for all the support we have received. Although our mission to minimize the carbon footprint can be a rather ambitious one, we know that together we can achieve great things.

I am thrilled to tell you that this year, we got lida onboard to write our sustainability report and it is even better than last year. Welcome to our journey towards a zero carbon paw print,

Jenni, lida
& the rest of the team





January

- New kibble recipes: Steady, Zippy, and Delicate
- Bug treat samples x Volare
- New names for Zero-Emission kibble



March

- Piloting in Germany
- New products: Lake Fish Topper + Poop bags
- 1-year anniversary
- New customer page



July

Alvar's first Lohja House Alvar in Kas

May

Campaign: Alvaristi EcoAction

February

- Setting up a team in DE
- New treats: Nuggets + Fish & Chips
- 10 000 Alvarists served
- Dr. Alvar's Grand Guide to Dog's Nutrition published



June

New product: Chicken Topper



April

- Alvar at Wolt
- Alvar's Breeders Club launched
- Commercial launch in Germany



2021



promotions:
Dog Fair 2021,
Kärrmatori



November

Campaigns: Black Dog day & Small Business Saturday

September

Avainlippu certificate for Alvar's poop bags, chews, vendace treats and toppers

October

Launch of Alvar's first bundle: Puppy Box



December

- Campaign: Alvar's Christmas donation
- Second bundle: Christmas package
- New products: Reindeer chew, Hemp oil, Wildfish Oil

August

- New kibble recipes: Slender, Serene and Bug
- Food donations as a monthly event



Our actions and decision-making are driven by values:

Change-seeking

Things should change and everything we do targets that.

Transparent

Contrary to industry standards, we want to tell everything.

Community-driven

Belonging to Alvars pack feels meaningful.

Alvar x SDGs

We are committed to working towards the UN Sustainable Development Goals (SDG). The SDGs offer a diverse understanding of the challenges of our time, and commit different actors to work together to achieve common goals.

For Alvar, the Sustainable Development Goals most integral to our operations are SDG 9, 12 and 13. In 2021, we have taken various measures to achieve these goals.

Goal #9 Industry, innovation and infrastructure

“Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation”

We believe that innovation is essential for sustainable development and with constant innovation we can keep leading the way towards a more sustainable dog ownership. Our aim since the beginning was to build a business model that fosters sustainable development. Looking at the current state of the pet food industry, the spark of change can be seen, yet is very slow. As a startup we have the agility, ambition and opportunity to challenge industry norms and conventions. Since the incumbents have failed to address climate concerns, such disruption is much needed.

In 2021, we:

- Launched the first ever Finnish chicken & lake fish toppers in the whole industry
- Launched dry food with black soldier fly larvae

Goal #12

Responsible consumption and production

“Ensure sustainable consumption and production patterns.”

Sustainable production and consumption is at the core of our operation. Our R&D philosophy is to develop needs-based products and to create solutions to serve the needs of dogs. We aim for sustainable use of resources with the smallest amount of waste. We want to change the way people consume. When we understand our dogs' needs better, we can offer sustainable solutions that serve both the dog and the environment.

The goal 12.2 is to *“achieve the sustainable management and efficient use of natural resources by 2030.”*

In 2021, we:

- Made ingredient choices that aim for this, such as including black soldier fly larvae as one of the main ingredients in two of our kibbles. In addition, we started using Finnish side-stream chicken in our wet food production.
- Used renewable energy in our production.
- Assessed the use of fish meal from different fishing areas of the Baltic Sea, as the fish stocks have recently been in public discussion. We concluded to start changing the current fish meal (DK) to a more sustainable fishing region (FI), if it is possible for the Danish production process.

The goal 12.3 is to “*halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses by 2030.*”

In 2021, we:

- Started to face the first batches of products passing their BBD (produced one year ago when we started our operations), and started monthly feed donations to avoid product losses and waste.
- Used products over their BBD to feed our own dogs, since the quality of the product is still considered high.

Goal 12.5 is to “*substantially reduce waste generation through prevention, reduction, recycling and reuse by 2030.*”

In 2021, we:

- Continued communicating detailed packaging information of our products and sharing recycling instructions.
- Shared tips on how to reuse old fabrics for dogs' toys.

The goal 12.6 is to “*Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.*”

In 2021, we:

- Published our first sustainability report from our first year, 2020.

Goal #13

Climate action

“Take urgent action to combat climate change and its impacts.”

Our mission is to minimize the carbon paw print and change the industry towards a more sustainable direction. Climate change mitigation requires understanding of complex challenges - as well as accepting and adapting to the changes happening. Reducing emissions takes place along our whole value chain. Our business model, our services and our products are designed to meet the criteria of reduced emissions. Not only do we operate sustainably but we require that the same standards and ambitions are met by our partners too, as we believe that collaboration is the key in achieving our goals.

The goal 13.3 is to *“improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.”*

In 2021, we:

- Added responsibility communication in our channels, for example by informing about the impacts certain ingredients have (both non-sustainable such as beef and sustainable such as vegetarian protein and bugs).
- Communicated constantly with our customers and those interested in our service and aimed to educate people about the impacts of pet food production.
- Increased communication that might help decrease unsustainable consumption habits, such as launching a *“Black Dog Day”* campaign in contrary to the consumption-oriented Black Friday.



The carbon paw print



Both our business model and our products are designed with carbon efficiency in mind. We've been extremely happy to be able to reduce the carbon footprint of so many pups already, but we will continue working towards reducing emissions.

Last year, we reported some focus areas that we are aiming to achieve in 2021. Here come the goals, and what we did to achieve them:

1 Adding more sustainable ingredients into our portfolio

We added sustainable alternatives to our portfolio, such as kibbles with insect protein, chicken topper made of Finnish side-stream chicken, and a chew made of reindeer and moose side-streams.

2 Delivering the products with natural gas vessels and trucks with lower emissions.

We reviewed the vehicle types being used for our deliveries together with our logistics partner. The conclusion was that our transports are done on average with the newest class of vehicles (= smallest emissions) that is available on the market.

3 Reducing the packaging materials

We added 6 kg kibble bag size to reduce use of packaging material, one bigger bag uses less material than several small ones.

For our new Reindeer Chew, we minimized the packaging materials by choosing to have only a paper label and a rubber band.

4 Reducing the travel distances of the ingredient and material deliveries

This was especially targeted to new markets outside Finland. We found a decent location for German warehousing and were able to mainly use local print houses and transport box services. Kibbles had a very short way to the market from Denmark, but treats and other products had a longer way from Finland.

5 Making the delivery interval less frequent

We've encouraged ordering less frequently and in larger amounts. Instead of 4 weeks, customers are offered to choose their subscription interval at up to 12 weeks. This is beneficial for both the environment (less deliveries) but also customers (lower kg price).

6 Additionally, we have:

- Tracked all our possible product waste to be able to donate it early enough.
- Calculated the carbon footprint of our new products and the footprint of our whole operations.
- Encouraged our community to act responsibly with sustainability campaigns: #AlvaristiEcoAction, Black Dog Day (response to consumption-oriented Black Friday), Small Business Saturday & Alvar's Christmas charity.

Nonetheless, the year has had its setbacks as well:

Because of some unexpected events in production, we weren't able to utilize some pre-labeled pouches or pre-ordered labels. These have been delivered to recycling.

In 2021, we faced the first batches running out of their BBD. It doesn't concern too many products, but we are learning to optimize production batch sizes and campaign to use the stocks efficiently.



The term “carbon paw print” helps dog owners assess emissions from their dog’s life. Studies also refer to ecological paw print (EPP) or the environmental paw print, and depending on the calculations, they refer to either greenhouse gas emissions, land and water use, or both.

For us, carbon paw print means the greenhouse gas emissions your dog and its lifestyle produces, especially regarding the dietary choices.

CO₂ calculations

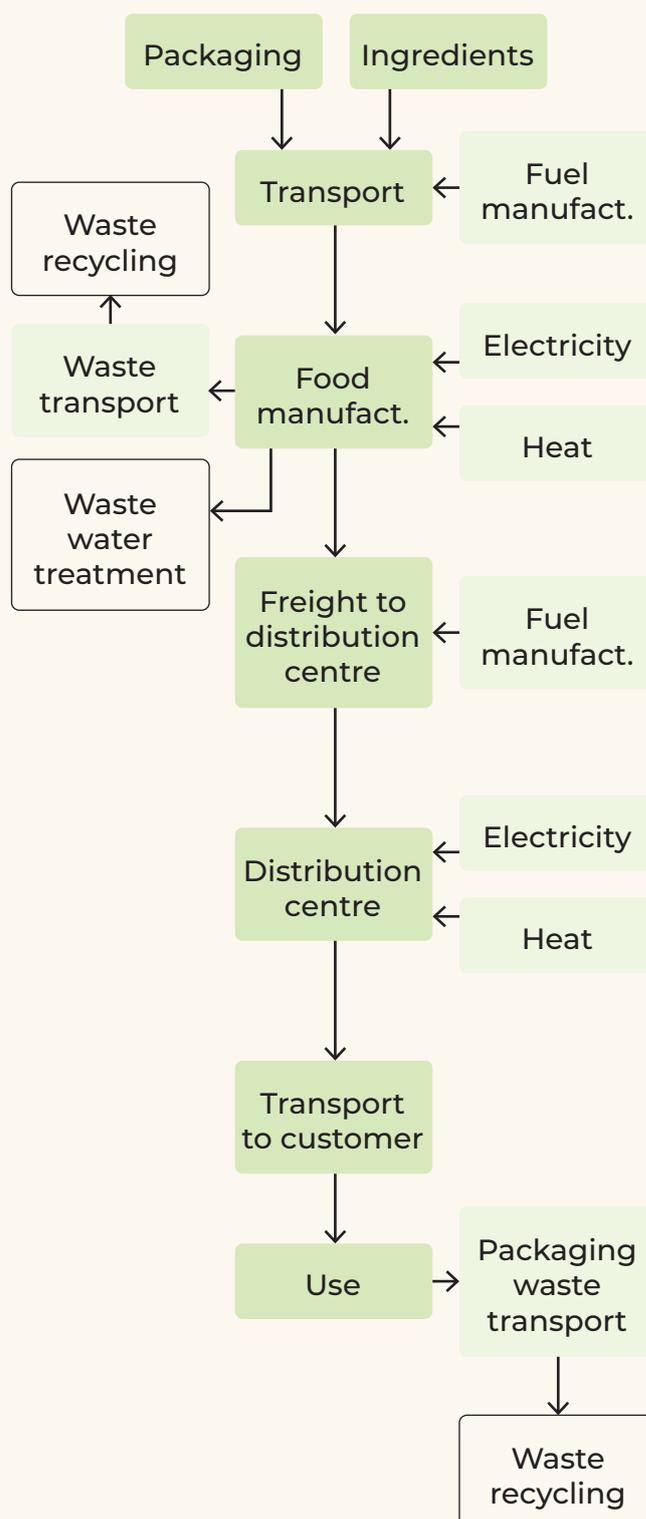
Having a science-based tool to measure the impact of our actions has been essential for the process of making our business even more sustainable. Carbon footprint calculations are a useful tool for measuring environmental impact. Although noteworthy that not all measurements are comparable side by side.

At Alvar, we use our CO₂ calculations to make better decisions. Knowing our impact along the value chain, we can prioritize and make reduction measures where it is most impactful.

Same as last year, the calculations are carried out by Useless Company Oy and are based on the industry standards: Product Environmental Footprint Category Rules (PEFCRs), Prepared Pet Food for Cats and Dogs (EU standard for dog food carbon footprint) and standard ISO 14067. UseLess' team has over 20 years of experience in different LCA projects. The calculations use the most recent research, methods and evidence.

In 2021, we had operations in two countries: Finland and Germany. Thus, the calculations were done for both countries.

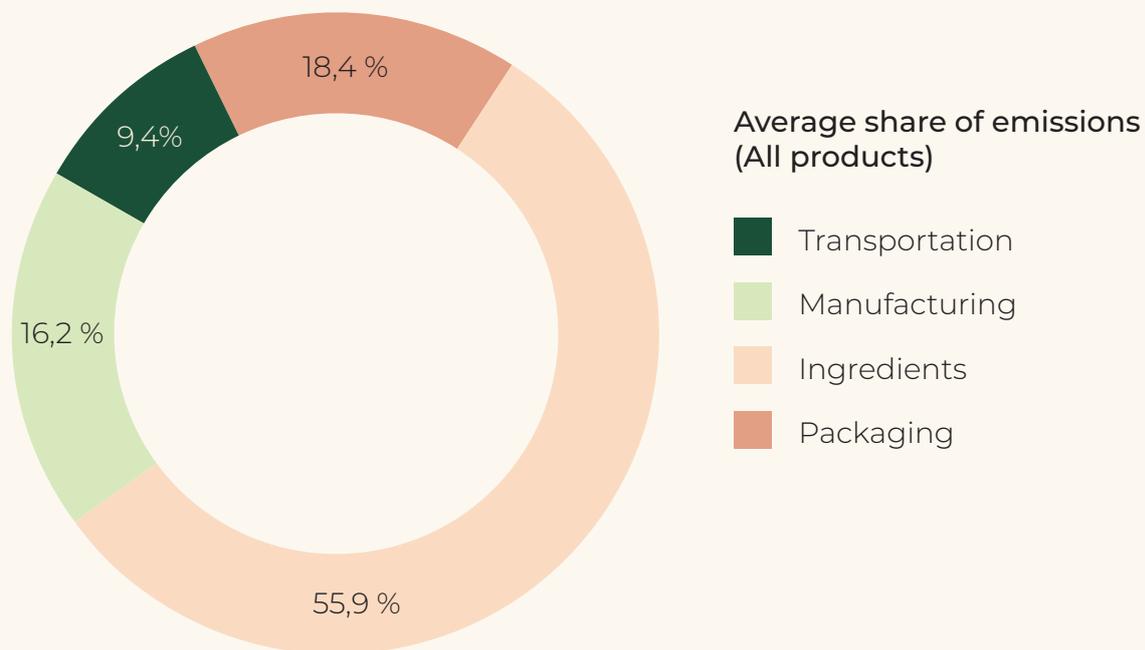
Reminder: our product calculations include all areas marked in green and light green in the overview on the right.



Carbon footprint per product

The number is reported per kg or litre (oils) of a particular product for both Finland and Germany.

Product	Finland (kg CO ₂ e / kg or l)	Germany (kg CO ₂ e / kg or l)
Softies Fish & Chips	1,57	1,46
Softies Nugget	1,24	1,06
Chicken topper	0,85	0,94
Fish topper	0,68	0,77
Dried fish heads	0,71	0,79
Reindeer chewing stick	0,61	0,70
Moose chew (chip)	0,54	0,62
Moose chew (small)	0,48	0,56
Moose chew (large)	0,44	0,52
Poop bag	1,26	1,36
Wildfish oil (100ml)	2,50	2,70
Wildfish oil (300ml)	2,00	2,10
Hemp oil (100ml)	2,10	2,20
Hemp oil (300ml)	1,50	1,60
Steady	1,30	1,19
Slender	1,27	1,19
Serene	1,21	1,13
Baltic sea	1,17	1,06
Verve	1,15	1,04
Root	1,10	0,99
Delight	1,09	0,98
Bug	1,00	0,92
Sturdy	1,00	0,89
Delicate	0,99	0,88
Zippy	0,96	0,85



The difference between the results of Finland and Germany are the emissions from transportation. Since we have multiple production partners, the end-product travels different distances, and therefore the results differ a bit by country.

The products that are made in Finland have a bigger carbon footprint in the German market, whereas the products produced in Denmark have a lower impact in Germany.

Nonetheless, the results indicate that choosing the location of a manufacturing partner can make a difference and therefore, Denmark is an ideal location considering all our markets now and in the future.

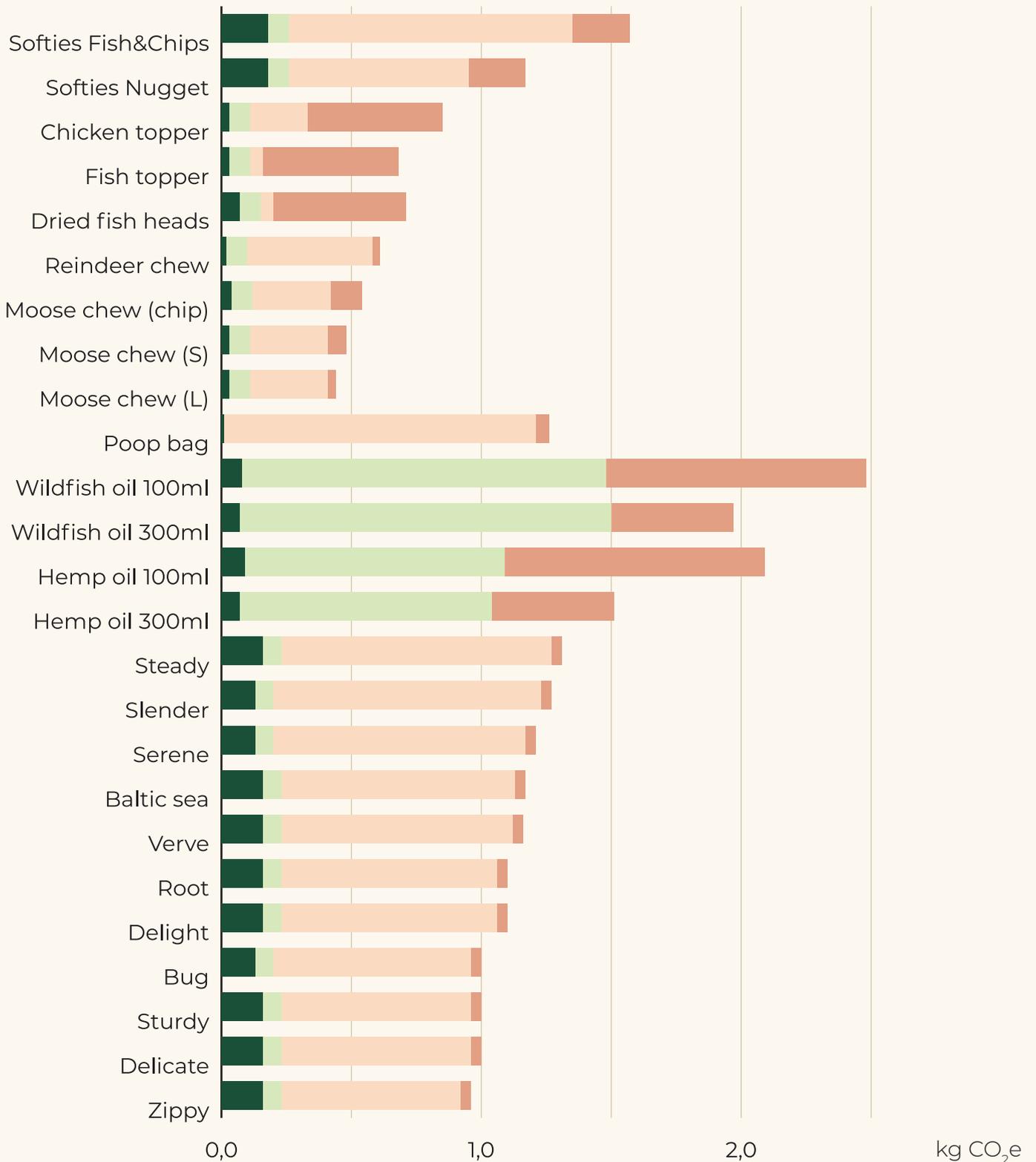
Ingredients make an average of 56% of the CO₂ footprint of our products (both countries included). This indicates that choosing the right ingredients can have a significant impact on the end result.

Additionally, if we look into the share of only the kibbles, the ingredients share is 81%. Since most dogs' diet consists mostly of kibbles, this proves that by choosing the low emission alternative, the carbon paw print can be reduced significantly. We have further explained the origins of the ingredients in the next chapter, so let's have a look at the numbers in more detail.



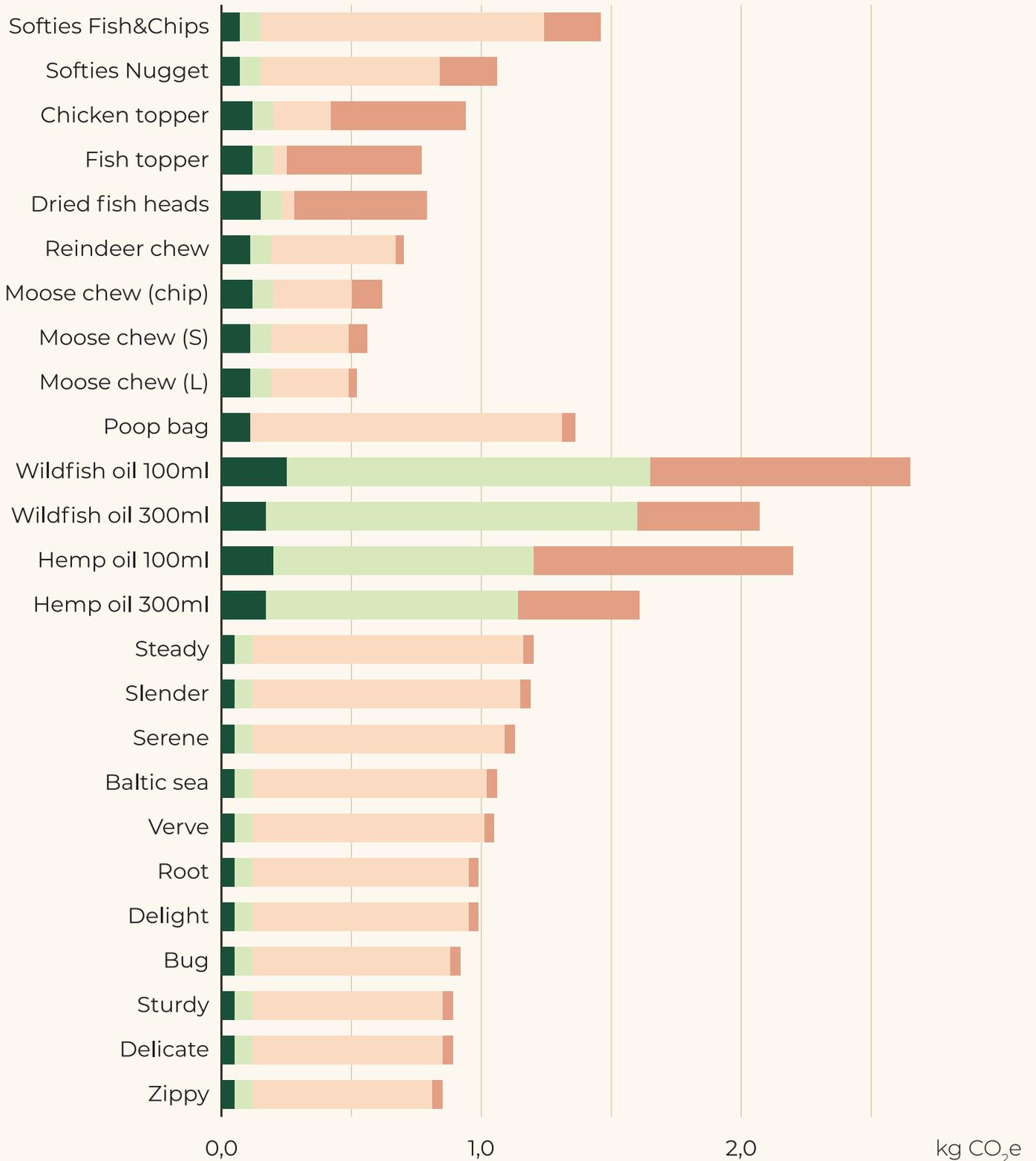
Share of product's emissions

Finland



Share of product's emissions

Germany



It can be noted that the oils don't have the "ingredients" part and the poop bags don't have the "manufacturing" part listed. In the oils' calculations, the ingredients are calculated as a part of the manufacturing phase, which is why they are not specified. In the poop bags, in turn, only the carbon footprint of the raw material production phase was considered in the calculations as the manufacturing carbon footprint was assumed to be negligible when the manufacturing company Walki uses renewable energy.

The poop bags seem to have relatively high CO₂ emissions, of which 70 % result from the raw material (bio-plastic) acquisition. The emissions of poop bags are reported per kg, but a roll of poop bags only weighs ~50g, so a single roll's emissions is about 0,065 kg CO₂. Additionally, when the poop bags are used, they have a positive impact on the environment. If the poop is left on the street or in nature, it can spread infectious diseases and parasites, as well as cause changes in soil nutrients.

The results for Fish & Chips softies show that the ingredients make 69% of the products emissions, of which the salmon oil is the most prominent one. The same applies to our Steady kibble recipe (80% ingredients), which also contains salmon oil. Although salmon oil has high emissions, we cannot dismiss its benefits, such as EPA and DHA, which are added to support the wellbeing of skin, fur, joints, heart, brain and are essential for growing puppies. However, knowing what parts create the most of the emissions helps us in making decisions to make our products even more sustainable.

The results for the dried fish heads show that the share of emissions from packaging are relatively high. The emissions are calculated in relation to the weight of the product, and because the product itself is so light, the emissions from packaging make up a large part of the product's footprint. The packaging of the fish head is a paper bag and sticker and thus, it is already a sustainable option.

The numbers also show that the share of the emissions of the metal can packaging of wet food is relatively large. The initial reason for choosing metal packaging was due to the current production lines only supporting metal can packaging and investing in new machinery has not yet been possible for our production partners. We are looking into the possibility of replacing metal cans with tetra packs, but the lack of suitable packaging lines slows down the process.

The graph shows that the oils are our most emission heavy products. However, it should be noted that the unit is per litre, so the amount of oil in a single bottle is smaller than for example in a 2 kg kibble bag. The daily dose of oil (e.g. a couple of tea spoons) is also way smaller, compared to other products. Nevertheless, the reason for the oils' relatively large CO₂ footprint is the quite energy intensive manufacturing. In addition, the oils are sold in plastic bottles, which increases the CO₂ footprint, compared to cardboard packaging.

Carbon paw print development areas for 2022:

1 Substitute or take out salmon oil in fish and chips softies.

A large share of the ingredients' emissions comes from the salmon oil, which could be switched to an alternative ingredient.

2 Find a more sustainable solution for topper packaging.

61-76% of our wet food emissions consists of the metal can. Our aim is to change the metal cans to another recyclable packaging format such as tetra packs.

3 Make the CO₂ information more available.

We will add the carbon paw print information to our product pages and the packaging labels. We also aim to increase the personalisation of the emission information, so that our customers could see how much their dogs have reduced emissions by switching to Alvar. In addition, our goal is to renew the carbon paw print calculator that we introduced in 2020, and make it more tailored.



Ingredient origins

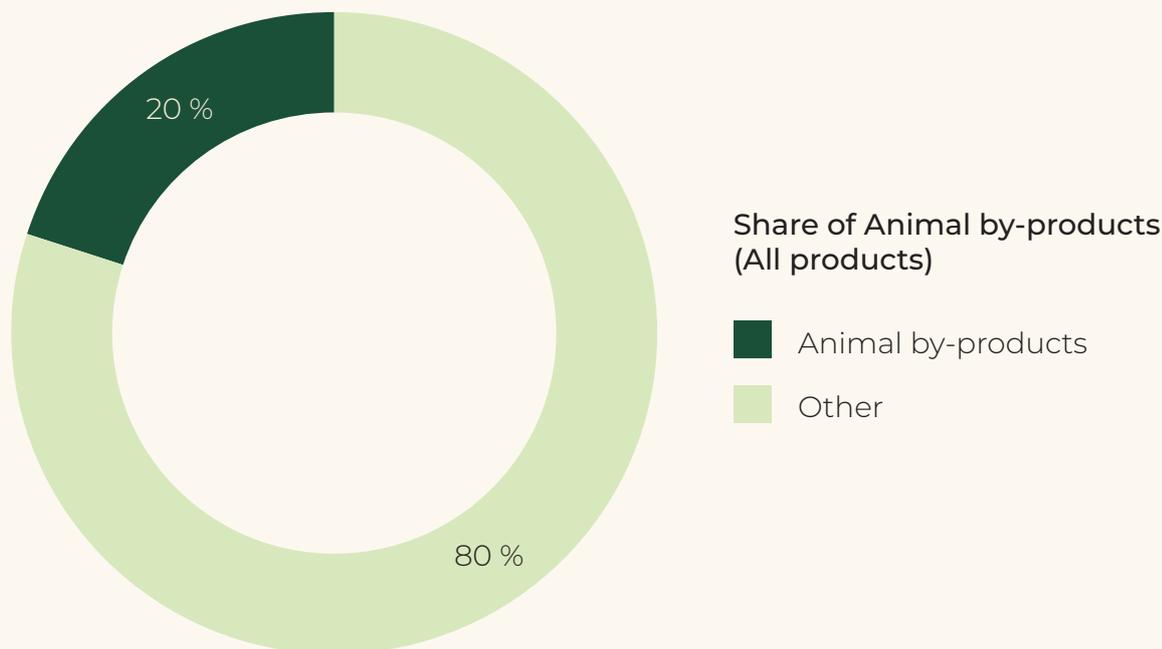
In 2021, our ingredient list grew in length since our portfolio expanded with 6 kibble recipes (Zippy, Steady, Delicate, Bug, Serene and Slender) and 8 other products (toppers, oils, chews). Currently, we have 11 kibble recipes, 3 treats, 2 toppers, poop bags (in two sizes), 4 chews (2 product ranges; Elk Chew & Reindeer Chew), and 2 oils in our portfolio (both in 2 sizes). In 2021, we got 4 new production partners, which totals to 7 different manufacturing partners.

Our kibbles and softies treats are produced at Nordic Petcare Group's factory in Ølgod, Denmark (Vital Petfood Group). The ingredients are carefully selected. We combine scientifically researched dog nutritional needs with environmentally friendly raw material options, thanks to the expertise of our veterinarian and co-founder Henna. We want to minimize the environmental harm that the production causes, which is why we have chosen environmental friendly options and whenever possible, sourced nearby.

The ingredients used in Alvar's recipes are of high quality from well known suppliers. The ingredients are analysed before being accepted into the production. In our R&D, we also use laboratory analysis and palatability tests to ensure sufficient nutrients, digestibility and highest quality.

Every once in a while, we get questioned why we are producing our kibbles in Denmark instead of Finland. Ensuring the safety and good quality of our ingredients comes first and thus, we chose an experienced manufacturing partner in Denmark. However, we also wanted to make sure we make environmentally friendly choices. The carbon footprint of a product is calculated by transportation, manufacturing, packaging, and ingredients.

Therefore, it is important to recognize that the carbon footprint of a product is up to several different factors, not only the manufacturing country. In other words, the fact that something was produced in Finland does not solely make it a more sustainable option.



To reduce the environmental harm and prolong the life cycle of ingredients, we want to use side-streams whenever possible. In our products, 14 out of 56 ingredients are clear side-streams.

Other than the kibbles, we have been able to utilize animal by-products (ABPs) in many of our products: Nugget treats, the Chicken Topper, Vendace treats, Elk chews and Reindeer sticks.

Sometimes wrongly „frowned upon”, ABPs are a sustainable source for pet food. For example in poultry production, a large quantity of the bird goes to waste: fillets are put on human plates, but nutritionally high-quality parts such as intestines are thrown away. Thus, using ABPs for pet food decreases the environmental burden of both human and pet food by minimising waste.

Furthermore, we use powder/meal as our format for protein ingredients. Using a dried meal instead of fresh ingredient is important for us, as it offers both nutritional and sustainability benefits: protein powder is consistent in quality, and as the liquid (that would be removed in the kibble extrusion process) has already been taken out, its logistics cause less emissions.

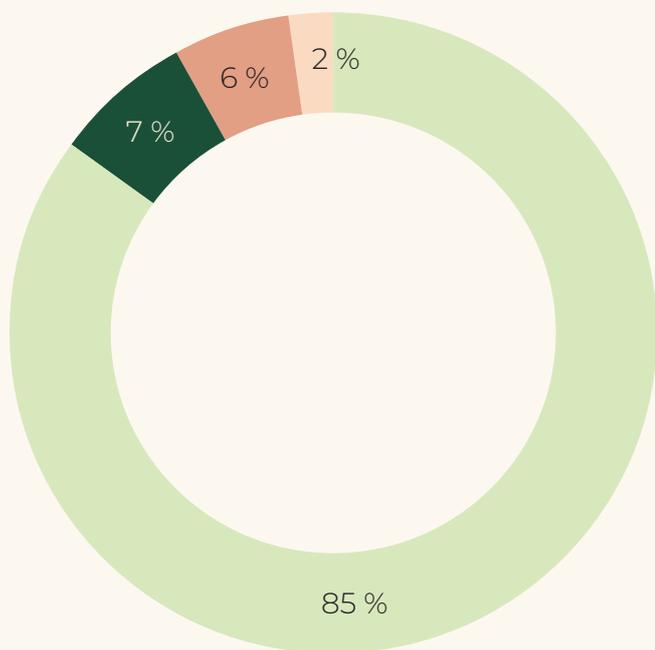


In 2021, we received the Finnish “Avainlippu” certificate for our Finnish products: chews, topper, vendace treats, poop bags and oils. The certificate is quite well known in Finland and is useful for our customers and stakeholders to see which of our products are made in Finland by using the Avainlippu logo in our Finnish labels and product pages.

Production partners

We choose our partners carefully and require the same standard of sustainability and transparency from them. Choosing the right partner is important so we can show that there is a demand for sustainable business. That way, we can inspire others in the industry.

Production partner	Products	Location	Description	Energy source
Kokkolan Nahka Oy	Elk & Reindeer chews	Kokkola, Finland	Operating since 1980, family owned. Biggest game animal leather producer in the Nordics.	Renewable + compensate their climate impact
Järvi-Suomen Kalatuote Oy	Fish topper Vendace heads	Kissakoski, Finland	Operating since 1980, founded on the shore of Puulavesi	Renewable
Ab Salmon-farm Oy	Wild fish oil	Kasnäs, Finland	Operating since 1980, offering high quality fish products.	Propane (By-product)
Naapurin Maalaiskana Oy	Chicken topper	Lieto, Finland Uurainen, Finland	Operating since 2013. Focus on the health of the environment and animals. All chicken comes from nearby.	Renewable
FoodFarm Oy	Hemp oil	Marttila, Finland	Joint business of HamppuFarmi and TransFarm - specialized in marketing hemp oil products. Experts in the field.	Solar + non-renewable
Walki Group Oy	Poop bags	Ylöjärvi, Finland	International business specialized in packaging. Poop bags produced in Finland.	Wind power + waste heat
Nordic Petcare Group	Kibble Softies treats	Ølgod, Denmark	One of the leading companies in the pet food industry since 1997. Focuses on dry petfood. Has multiple certificates, quality control systems, their own vets and UN Global Compact membership.	Renewable



All product's ingredient origins

- Nordics
(Finland, Denmark, Norway)
- Germany
- Other Europe
(Netherlands, France, Spain, UK, Belgium, Bulgaria)
- Outside Europe
(Paraguay, India, China, Russia, Brazil)

In all of our products (in 2021), 85% of our ingredients are from the Nordics, 7% from Germany, 6% from other European countries and 2% from outside Europe. Compared to 2020, there were slight changes in the numbers. For example, the percentage of the Nordic origins has lowered a tad because of the kibble ingredient additions (e.g. insects) that come from outside the Nordics. However, the amount of Finnish products has increased, which has kept the percentage of Nordic ingredients high.

We had a mistake in last year's report, so the right numbers for the 2020 origins are: Nordics 88%, Germany 6%, other Europe 3%, outside Europe 3%.

Noteworthy, though, is that even if a product is not 100% Finnish or Nordic, it does not mean it is less sustainable. For example, our Bug kibble has a Nordic origin rate of 69% (because the insect raw material has been sourced from the Netherlands due to no Nordic availability), and it has one of the lowest CO₂-footprints of our recipes.

	2020	2021
Manufacturing partners	3	7
Ingredients	45	56
Products	9	23

List of all ingredients and their origins

We want to be as transparent as possible, and let our customers and other stakeholders know where the ingredients come from. Below, we have listed all used ingredients and their origins. However, we do not have the specific information for 4 ingredients, only the continent (Europe) the ingredients originate from. The reason for this is because the particular ingredient

can come from different countries within Europe. Despite our efforts, it has not been possible to turn this information more exact.

It is also worth noting that even though a few ingredients come from outside Europe, the amount and volume of these ingredients is very small.

Ingredient	Origin country	By-product
Hemp seed oil	Finland	
Vendace head	Finland	x
Lake fish	Finland	
Moose leather	Finland	x
Reindeer	Finland	x
Chicken (topper)	Finland	x
Egg white (topper)	Finland	
Potato fiber (topper)	Finland	
Herring (oil)	Finland	
Sprat (oil)	Finland	
Fish meal	Denmark	x
Salmon oil (cold pressed)	Norway	x
Fish broth	Netherlands	x
Whole potato	Denmark	
Beet pulp (dried fibers)	Denmark	
Faba beans	Denmark	
Soy protein	Paraguay	
Potato starch	Denmark	
Pea starch	Norway	
Spinach	Denmark	

Ingredient	Origin country	By-product
Tomato	Spain	
Seaweed	Denmark	
Beet sugar	Denmark	
Potato protein	Denmark	
Refined rapeseed oil	Germany	
Linseed	Russia	
Hemp seed oil	Denmark	
Brewer's yeast	Germany	
Lecithins	Germany	
Psyllium husks	India	
Fructo-oligosaccharides	France	
Minerals	Denmark	
Hydrolyzed yeast and lupine	Europe	
Mannan-oligosaccharides	UK	
Glucosamine	China	
Chondroitin sulphate	Denmark	
Dextrose	France	
Glycerol	France	
Chicken liver meal	Germany	x
Chicken fat	Germany	x
Chicken meal	Denmark	x
Poultry protein	Denmark	x
Dried whole egg	Germany	
Chicken broth	Brazil	x
Duck meal	Europe	x
Oats	Denmark	
Dehulled oat	Denmark	
Barley	Denmark	
Herbs	Germany	
Chicory root	Belgium	

Ingredient	Origin country	By-product
Apple	Europe	
Rosehip	Bulgaria	
Cranberry	Poland	
Black currant	Denmark	
Insect protein	Netherlands	
Pea fiber	Unknown	

Ingredient development areas for 2022:

1 More insects

Continue developing our insect based selection by looking into the possibilities insect as an ingredient can offer.

2 More local

Consider options for even more local production closer to the end customers.

3 European plant protein

Changing the South-American soy to European soy has been impossible because of the high demand of European soy. We will be looking into possible recipe changes to replace the soy.

4 More ethical & transparent

Pushing for transparency and ethical production in animal-based protein production. Our main goal for choosing ingredients will remain to be using by-products and ingredients low in emissions, however, we do take other sustainability aspects into consideration as well. We choose the most ethical supplier whenever possible - and are constantly negotiating with our suppliers to better increase transparency. That way, we can ensure socially responsible production and high standards in every one of our partner facilities.

Packaging

We have always wanted to keep our packaging as simple as possible. In addition, we use the following criteria for our packaging:

- 🐾 **They ensure the safety of the products**
- 🐾 **They are environmentally friendly**
- 🐾 **They are easy to recycle or reusable**
- 🐾 **They are durable.**

It all started with a durable paper bag to keep the kibbles fresh but could be recycled afterwards. However, our portfolio has grown a lot since 2020 and as a result, we have had to add packaging materials.

Alongside the packaging materials we already had in 2020, we have added a closable treat bag, metal cans for the toppers, plastic bottles and metal corks for the oils, a rubber band and paper label for reindeer chew and a paper banderroll for

the poop bags. In addition, we renewed our kibble bags and some of our leaflets and added a shipping box with a new design.

While the amount of packaging material has increased, we have also made some changes to reduce the material we send inside the packages. Previously, we sent a feeding table with each delivery.

In 2021, we switched the separate cards to stickers that can be placed onto the back of the kibble bag. However, we still send puppy feeding tables separately, but are looking to switch this as well when we get new labels in production. In addition, as we released a new product, the Reindeer Chew, we wanted to think about how we could further minimize the use of packaging materials. We landed on having a paper label and a rubber band, which can be reused.

ALVAR



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ALVARIN NOLLAPÄÄSTÖNAPPULA PIRTEÄ
2kg

Ravintosisältö per 100g

410	kcal energiaa
30%	proteiinia
20%	rasvaa
1.7%	raakakuitua

+ Oikeassa tasapainossa kaikki koiran päivittäin tarvitsemat vitamiinit ja kivennäisaineet.

Kartonki- kierrä- tettävä		Tehty Tanskassa pohjoismaisista raaka-aineista	Tuotanto- erä & parasta ennen: katso takaosa
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List of packaging materials

Product	Packaging producer	Country	Material	Recycling*
Delivery boxes	Carton by Stora Enso Oyj Assembly by ER-Pahvityö Oy	Sweden (Stora Enso), Finland (city: Lahti, ER-Pahvityö)	Carton	Carton
Kibble bags	Mondi Group	Italy (city: Padua)	Double sided kraft paper with inner surface layered with PE	Carton
Kibble labels	Lito Press Ltd.	Denmark	Paper sticker from UPM Raflatac; FSC & PEFC certified paper	Paper
Softies pouches	Unknown	Unknown	Kraft paper PAP45 with a polypropene layer (OPP30) + zipper + tear	Carton
Softies labels	Lito Press Ltd.	Denmark	Paper sticker from UPM Raflatac; FSC & PEFC certified paper	Paper
Vendace bags	Unknown	Unknown	Unknown	Carton
Vendace stickers	Unknown	Unknown	Unknown	
Oil bottles 100ml	Jouco Oy (broker)	Netherlands	PET	Plastic
Oil bottles 300ml	Jouco Oy (broker)	Poland	PET	Plastic
Oil caps	Jouco Oy (broker)	Great Britain	Aluminium, lacquer and sealing	Metal
Oil labels	Karico Oy Tarrapaino	Print in Finland (material from Germany)	Polypropylene and paper	Plastic
Chicken toppers can	Silgan Metal Packaging Leipzig	Germany	Metal	Metal

* Always check your local recycling instructions. All labels attached to bags, bottles, cans and pouches can be recycled with the packaging.

Product	Packaging producer	Country	Material	Recycling*
Fish toppers can	Unknown	Unknown	Metal	Metal
Chicken toppers label	Origos Oy	Finland	Unknown	Paper
Fish toppers label	Unknown	Unknown	Unknown	Paper
Elk chew label	Origos Oy	Finland	Nautilus recycled paper by Mondi	Paper
Paper bag for chews	Napakka Oy	Sweden	40-60 g/m ² Kraft paper	Carton
Reindeer chew label	Origos Oy	Finland	Nautilus recycled paper by Mondi	Paper
Reindeer chew elastic band	Napakka Oy (broker)	Unknown	Natural rubber	Reuse/ mixed waste
Leaflets Finland	Origos Oy	Finland	Nautilus recycled paper by Mondi	Carton
Leaflets Germany	Flyeralarm	Germany	Recycled paper and raw paper 250g matt PEFC™-paper, Emissions from printing compensated	Paper
Poop bags label	Unknown	Unknown	Unknown	Paper
Canvas bag	Dispak Oü	India, printed in Estonia	70% recycled GRS certified cotton, 30% polyester	Reuse Mixed waste
Clothes peg	Based on availability: Sinituote Oy, Biodora Company Ltd	China (Sinituote Oy) and Austria (Biodora Company Ltd)	Wood, metal	Reuse/ Mixed waste



Greasy bags incident

In 2021, we encountered problems when changing to a new kibble bag material - the grease was able to leak through the inner layer and was absorbed into the outer layer. Luckily, this did not affect the quality of the food. We took immediate action and changed the bag material in the next batch.

We communicated openly with our customers and advised them to store the food in a safe place where the grease wouldn't leave any stains. We also sent out extra jute bags where the food could be stored to avoid any grease stains. This was an unfortunate event that taught us to be more careful when changing to new materials and do more testing in the future!

Packaging development areas for 2022:

1 Less cards

Currently, we send separate feeding cards to puppy owners but we aim to include a feeding table in the new packaging labels so we can leave out the separate feeding card.

2 Less suppliers

We are sourcing our packaging materials from several suppliers. Centralizing sourcing would make it easier to optimize material choices, certificates, transport distances and transparency.

3 EU legislation

The recycling and packaging material legislation is under change in Europe. We follow this carefully and react when needed.

4 FSC everywhere

We aim to use only FSC certified materials in all our packaging.

5 Less paper

We are considering removing the printed package content list from the packages and only use an electronic receipt.

Logistics

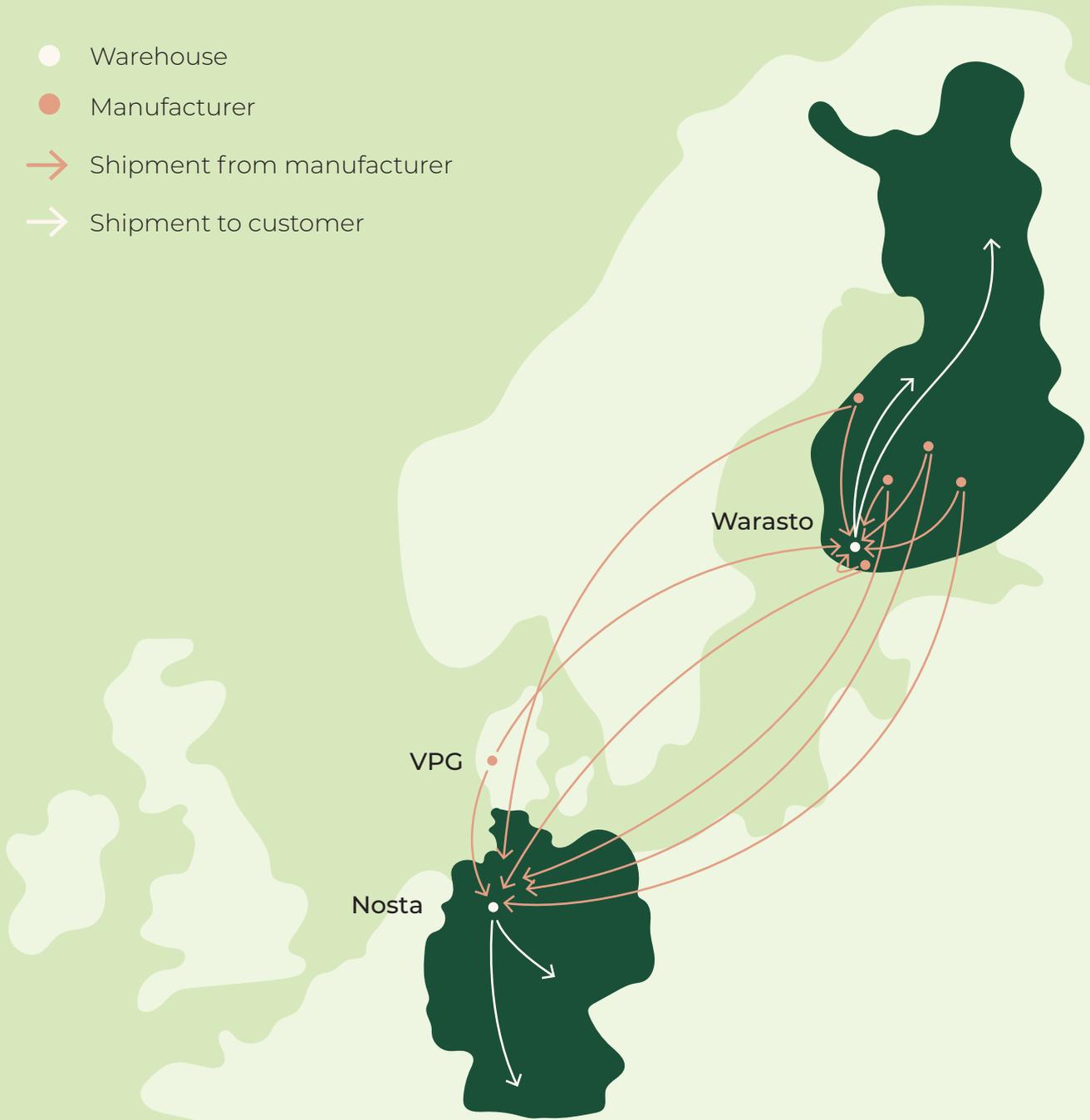
In 2021, we expanded our operations to Germany and our product portfolio became broader at the same time. Naturally, we had to add a few stops along the road that our products travel.

Our production partners are located in Finland (10/23 products) and Denmark (13/23 products). Products from all of our production partners are first shipped to our warehouses in Finland (Warasto) and Germany (Nosta). Only exception were the chews, which were sent from the Finnish

warehouse to the German warehouse, and not directly from the supplier. However, because of the location of the warehouses, this didn't create extra transport kilometers.

From the warehouses, the products are shipped straight to our customers. With our 'direct-to-dog' model products travel from the factories straight to our warehouse, where they will be shipped to our customers, reducing need for extra stopovers, terminals or storages.

- Warehouse
- Manufacturer
- Shipment from manufacturer
- Shipment to customer



Both countries

Truck and pallet freight booking:
Leafhill Solutions Oy

Leafhill

“Privately owned family company founded in 2010. Our vision is to deliver the most innovative and most transparent Logistics Department Service.”¹

We were the first pilot customer to calculate the ecological footprint of our transport kilometers with Leafhill.

In our transportation, we aim to always fill the trucks as full as possible. This way, there is no wasted space in the deliveries, which leads to a smaller amount of emissions.

**Overall,
transportation
accounts for 9%
of the total CO₂
emissions of all our
products.**

¹ www.leafhill.fi/en/company/

Finland

Warehousing & order handling:
Warasto Finland Oy

Warasto

“Equality leads to teamwork where everyone’s contribution is important for everyone. We can think independently, but we work together and support each other for the common goal. In all our activities we aim to promote environmentally friendly operations.”²

The emissions from warehousing are very small for our products. The electricity consumption and heat consumption per kg product is assumed to be 0.007 kWh/kg food and 0.005 kWh/kg food.

The electricity used is assumed to be 90.5 % renewable and the heating to be average district heating in Turku area. The share of the distribution centre energy consumption is insignificant in the product carbon footprint.

**Overall, warehousing
accounts for less than
1% of the total CO₂
emissions of all our
products.**

² www.warasto.fi/en/about-us/

Germany

Couriers: Posti Group Oyj,
Budbee Oy

Posti

“Posti is already 100 percent carbon neutral, but that’s not enough for us: our new, ambitious goal is to completely eliminate our emissions by 2030. In addition to minimizing our footprint, we want to put our competencies to use to make things better. For example, we want to make e-commerce more sustainable.”³

Budbee

“Budbee has climate compensated for every delivery since the company was created. Budbee uses the greenest and most cutting-edge terminal in the last mile space! What makes this terminal different is that it is so energy self-sufficient. More than 80% of the facility’s roof is covered by solar panels, which produce about 232,000 kWh of electricity annually.”⁴

Warehousing & order handling:
Neon Smart Logistics GmbH (Nosta)

Nosta

“We continuously improve our processes and initiate technological changes to create sustainable solutions. For example, we save energy and fuel by bundling the flow of goods and ensuring high capacity utilization of our transports and reduce CO₂ emissions, particulate matter and noise pollution.

Our employees are the basis of our success. Their well-being and health are important factors for the consistently high quality of our services.”⁵

Courier: DHL

DHL

“With our mission to achieve net-zero emissions by 2050, we strive for clean operations for climate protection. We will increase our use of sustainable aviation fuels, design all new buildings carbon neutral, offer a comprehensive portfolio of green products and electrify 60% of our last-mile delivery.”⁶

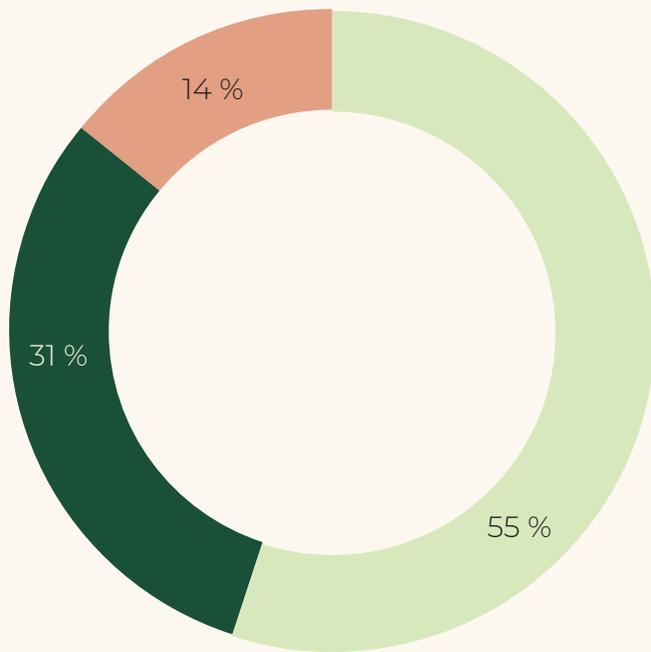
3 www.posti.com/en/sustainability/environment/

4 www.budbee.com/en/sustainability/

5 www.nosta.de/en/nosta-group/sustainability

6 www.dhl.com/global-en/home/about-us/sustainability/environment.html

Logistics in numbers

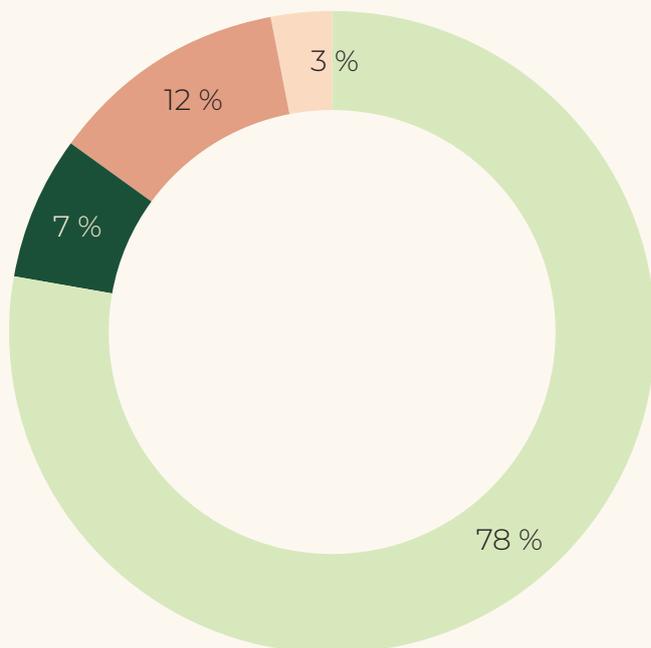
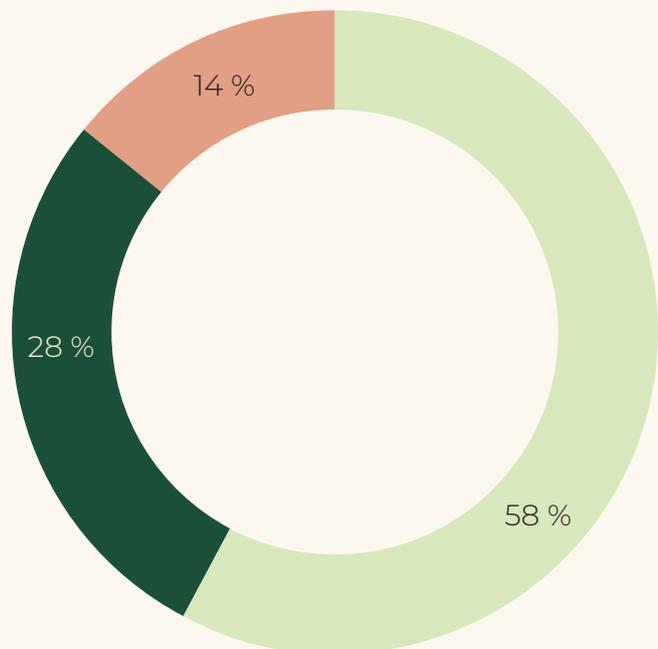


All packages sent in 2021

- Finland (Posti)
- Finland (Budbee)
- Germany (DHL)

Delivery type in Finland (Posti)

- Home delivery
- Pick-up point locker
- Pick-up point other



Average delivery time Finland (Posti)

- 1 day / same day
- 2 days
- 3 days
- 4 days or more

Logistics development areas for 2022:

1 Combine shipments

Single pallet freights were frequent when our operations grew. We will follow the amount and try to combine shipments as often as possible.

2 Nordic warehouse

Finding an optimal warehousing location (to minimize transport kilometers) for new Nordic markets.

3 Pilot local dry food production in Finland

As the market has developed there are now several dry food manufacturers operating in Finland. We intend to test co-production in 2022.



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koiranherkku Järvi-Suomesta
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66% proteiini Parasta ennen: 2/21
10.3% rasva Valmistanut: Järvi-
12.1% kosteus Suomen Kalatuote
F7903-107
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Minimizing waste

We minimize waste already in the production phase. None of our ingredients go to waste as the extras can be exploited for VPG's* (Vital Petfood Group) other production processes.

Reasons for product waste:

- 🐾 **The packages have not been collected by customers or they have been returned.**
- 🐾 **The packages have been damaged somewhere along the production, packing or transport.**
- 🐾 **Products that are close to or exceed best before date.**
- 🐾 **Others, such as misplaced or missing labels.**

We do our best to ensure that our products are properly packaged during transport, but unfortunately, we cannot always avoid broken or otherwise damaged bags.

To avoid product waste, we reuse returned and damaged items. Before, our bags were not resold because of the personalization

(name) in the bag, however, we changed our processes and were able to resell returned products starting from September 2021. The returned products are first examined to make sure they are in original condition, then we use stickers to cover the names in the bag so we could reuse items that are otherwise in faultless conditions. Returned items are also used in our sponsorships.

As for the unsold products, to avoid discarding usable products, we donate them to those who need them. We have collaborated with various organizations to distribute the dog food. We prioritize local organizations to minimize the transportation distances and also those who help people in need and less fortunate.

In 2021, we wanted to further develop tracking of product waste but also contribute to helping local communities on a regular basis. In August 2021, we started monthly collaborations with a few (AKV, Maarian Seurakunta, Operaatio ruokakassi) organizations with regular deliveries.

*The Danish factory in Ølgod is operated by Vital Petfood Group, which is owned by Nordic Petcare Group

List of organisations we have collaborated with in 2021:

Finland

Organization	kg
Maarian seurakunta (church)	200
Kontulan diakonissalaitos	50
Fundraising - sled dog farms and Ivalo's found animal shelter	120
Stadin Safka	180
Operaatio ruokakassi	1804
Autetaan Kun Voidaan	580
Helsinki Humane Society HESY ry	3072
Suomen löytöeläinten kummit SLEK ry	100
SEY Animal welfare Finland (multiple locations)	2438
Auringonkoirat charity sale	40 + some treats
Imatran kennel club (guide dogs)	40

Germany

Organization	kg
Stephanie Schubert Institut Forschung Listenhunde e.V.	20
Helferherz Flensburg	10
HSV Rheydt 1909 e.V.	52
CITA e.V.	20
Hundesportfreunde Rheinsberg e.V.	24
Tierhilfe Hof Samtschnute	16
Chillis Hundehotel	8
Mischlingsliebe e.V.	22
Berliner Tiertafel e.V.	10126
Fellpfötchen e.V.	13836

Sidenote: We want to highlight that all our donated products are ensured to be good in quality and safe to consume.

Waste development areas for 2022:

1 Minimize broken bags.

Minimizing the amount of broken bags by developing the packing process: we have already been improving this, but the target is to get this close to zero.

2 Improve stock handling

Improving production frequency, amounts and stock handling to reduce the amount of products getting closer to their BBD.

3 Better reporting

Report products that are thrown away because of BBD or other reasons.



ALVAR



500g



ALVAR

For the
Conscious Pup.

ood for the
conscious Pup.

Compensation

We compensate all emissions from our operations in co-operation with NGS Finland Oy. As discussed before, we have always wanted to be clear that compensation should not be the only tool for reducing emissions but an additional one when alternative methods are used.

Our emission calculations include all sold products and emissions from our organization, i.e business travelling and office spaces. Our total emissions in 2021 were 201 000 kg CO₂, of which 95% is from products. The compensation round is carried out based on our estimate, which is based on our detailed CO₂ emission calculation projects with external experts. The estimate and compensation round for 2021 totals 171 000 kg CO₂. The emissions left (30 000 kg CO₂) will be added to our next compensation round. The projects are the same as last year and focus on extending the carbon sequestration cycle of Finnish forests and afforestation of new land areas.

85% of the compensation is targeted at the extension of forests' carbon sequestration cycle.

The extension project focuses on supporting forest owners to keep the forests growing instead of chopping them down. It is often more profitable for the owners to chop down the trees than keep them growing, but with our support maintaining the forest becomes more profitable. When we allow the forests to grow longer, the share of the log tree grows. Logs can be then used as a building material allowing the carbon to be captured longer.

The compensation share is 145 000 kg CO₂ and the project is carried out in Lohja. A land area of 8,6 hectare is set to capture 117 000 kg CO₂ and together with the surplus from last year 33 000 kg CO₂, the compensation totals 150 000 kg CO₂.

15% of our compensation is targeted at afforestation of new areas.

The purpose of an afforestation project is to create a new forest area to places that would not otherwise be afforested without the financial support. Afforestation projects are researched to have long lasting results beneficial for the climate.

The calculations take into account the first 55 years of the forests' cycle. The compensation share is 26 000 kg CO₂ and carried out in Pihtipudas, Isoahokangas. The land area of 0,11 hectare is part of a larger field area. All projects are monitored annually and inspections are carried out to prevent misuse.

Year	Compensation kg CO ₂
2020	71 400
2021	171 000
Total	242 400

Our emissions have indeed more than doubled in the last year due to increase of customers, sales and products. Since we only started our operations in April in 2020, the compensation amounts aren't yet comparable.





Team Alvar

We at Alvar are committed to creating an equal and inclusive environment of mutual respect. Ensuring a workplace that is free of discrimination and harrassment comes first.

Especially, as the pandemic is still ongoing, many of our employees work from home. Regardless, we aim to keep up an atmosphere of excitement and good spirit.

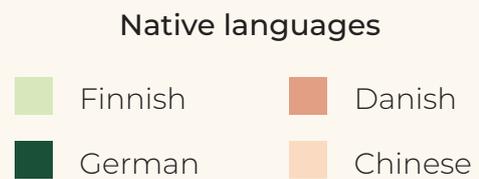
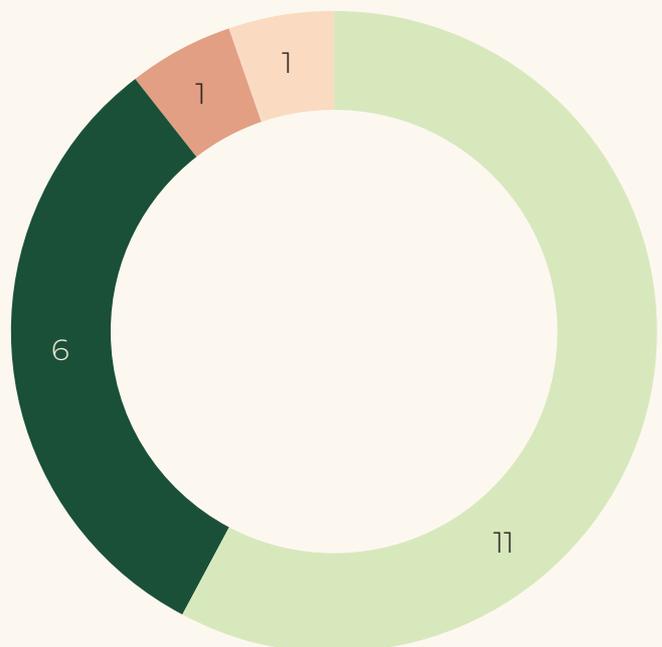
Moreover, we want everyone to have the opportunity to enjoy and express themselves. We have “no-work-talk” chats weekly on Mondays with the whole team. In 2021, we were also fortunate enough to arrange some activities outside work, like a team day in Lahti in the summer. Alvar’s success is thanks to our amazing people (and dogs) and we want to continue to support and encourage self development and continuous learning. We have monthly one-on-ones, in which we go through the last month’s development and give the opportunity to express thoughts and concerns. We’ve also worked to improve our ways of working and processes through joint efforts in e.g. project retrospectives and an internal communication workshop.

In 2021, we got many new team members (both humans and dogs) in our pack!

	2020	2021
People	8	19
Dogs	8	13

Gender	2020	2021
Female	5	13
Male	3	6
Non-binary	0	0

	2020	2021
Managers	4	4
Employees	4	15



What's next?

We are very excited for 2022 and by the time this report comes out, we have already opened new markets in other Nordic countries: Sweden, Denmark, and Norway. We are currently recruiting Nordic team members and have a few joining us in March 2022.

We aim to further reduce the CO₂ emissions of our products. Our calculations show that there are some key areas where we can make improvements. Therefore, we will continue finding alternative ingredients and packaging materials. Even though the total emissions of our operations grew, we want to make sure that the individual products' emissions remain low.

On the ingredient front, we have been working on making our origins list even more transparent and we will be continuing to find ingredients from traceable sources and we aim to finalize this during 2022. In addition, to minimize the transport distances and achieve 100% transparency, we continue looking for options for local production.

We want to increase our sustainability communications: with all the information we currently have, there is room for improvement in terms of communications, such as product specific CO₂ emissions or the tailored CO₂ journey.

To be able to provide even more information and confirmation about our sustainability work, we will be looking into the opportunities to certify our products, service and operations.

Additionally, we will be exploring the opportunities to offer products beyond food to serve our customers better and provide sustainable alternatives in other areas of dogs' journey.

Thank you so much for reading this – if you have any questions or comments, please do not hesitate to contact us at:

hello@alvarpet.com



Cheat Sheet

 <p>26.609 Dogs fed since start</p>	 <p>1,5 million Portions served in 2021</p>
 <p>1.377.315 kg CO₂ Saved since start</p>	<p>100% of products' CO₂ paw print calculated & published</p>
 <p>171.000 kg CO₂ Compensated in 2021</p>	<p>8,6 hectare Thriving Alvaristi forest</p>
 <p>7 2020: 4 Manufacturing partners</p>	 <p>19 2020: 7 Employees</p>
 <p>Sustainable ingredients added: Insects, reindeer, lake fish and side-stream chicken</p>	
 <p>Zippy Lowest emission kibble</p>	 <p>Verve Favorite kibble recipe</p>
 <p>Chicken topper & Vendace treats Favorite products</p>	
 <p>Best dog food supplement in 2021 Futtertester.de award for Alvar's chicken topper</p>	

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 Alvar Pet



ALVARIN NAPPULA KANALLA & KAURALLA
2kg

Ravintosisältö per 100 g	
382	kcal energiaa
26%	proteiinia
17%	rasvaa
3,3%	raakakuitua

* Sirkasta ruokkimista kaikki koirat pitävät
Huomio: ruokkimista ja ruokkimista

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