

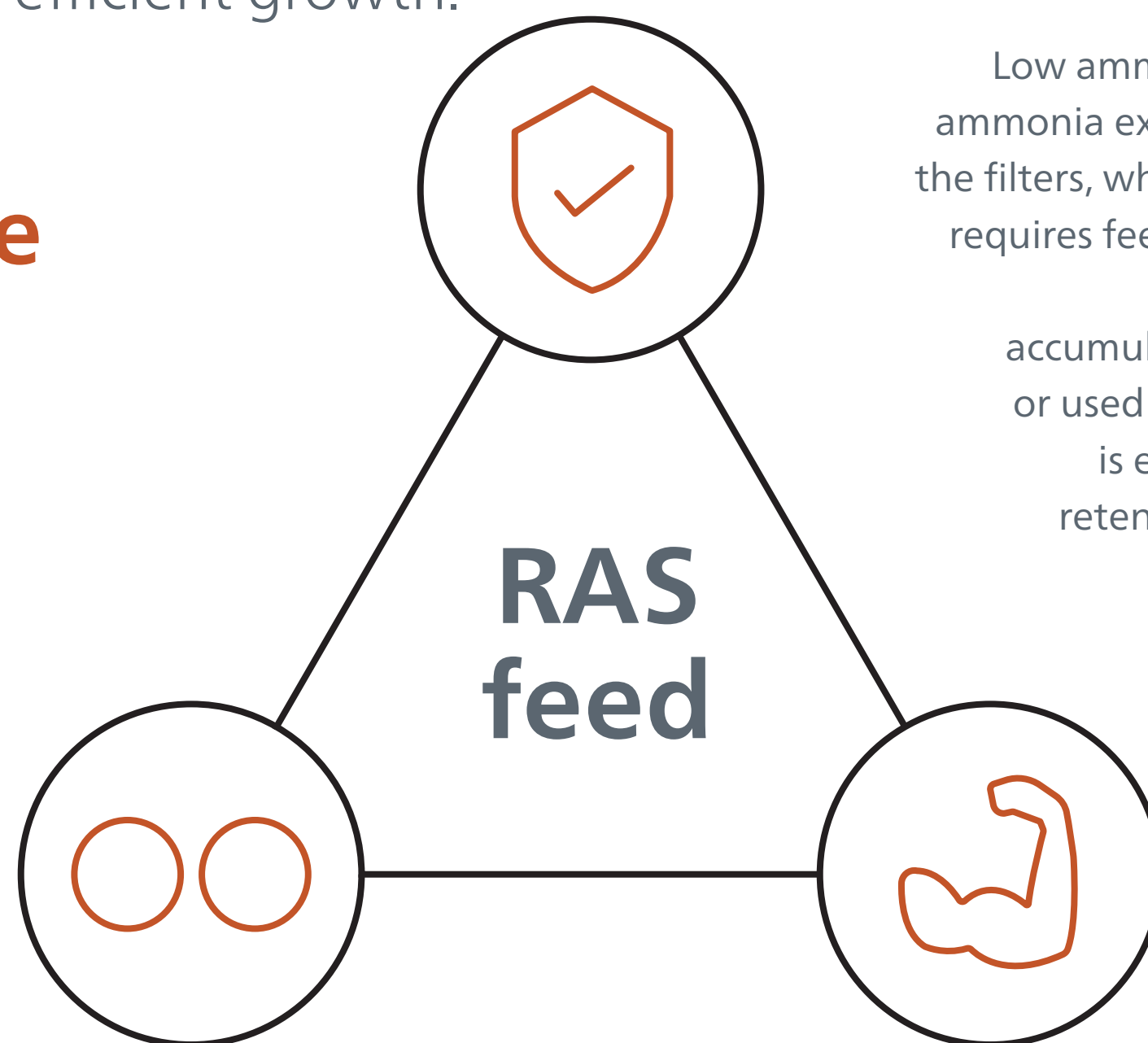


Key aspects when choosing a **RAS** feed.

A trout **RAS** feed needs to precisely meet the nutritional requirements of trout for optimal and efficient growth.

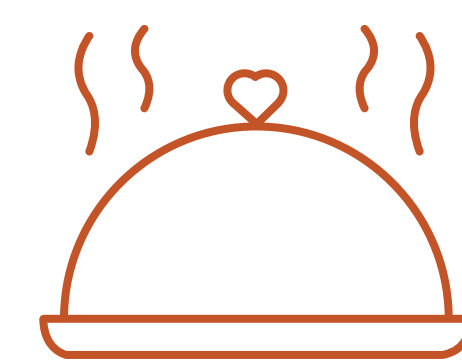
Firm, uniform & durable

RAS feed needs to consist of uniform, firm and durable pellets because the feed in RAS is mostly transported to the feeders automatically by air, spirals or chains. This physical process puts a lot of friction on the pellets, which can lead to broken pellets and dust. It is crucial to know what pellet sizes the automatic feeding system can handle without creating dust. Fish cannot eat dust, and thus this part is lost for growth. It can also not be removed easily by the filters and therefore pollutes the water. Dust can irritate the gills of the fish and also impair the nitrification process.



Optimal DP:DE ratio

Low ammonia excretion per kg of feed is favourable in a RAS. A low ammonia excretion is beneficial to the trout and minimises the load on the filters, which helps to maintain optimal water quality. Achieving this requires feed with high protein retention. The more feed protein used for growth, the less will be used for energy purposes or fat accumulation. Any feed protein that is burned for energy purposes or used for fat accumulation is de-aminated, after which ammonia is excreted. An effective mechanism for increasing the protein retention in trout is to work with a low ratio between digestible protein and digestible energy, the DP/DE.

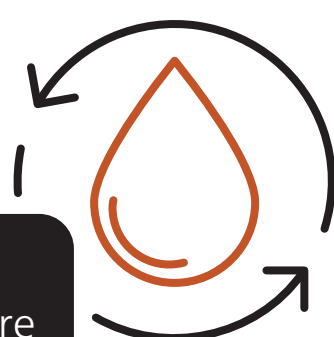


Digestibility & Palatability

A RAS feed needs to be palatable in order to facilitate a proper feed intake and a high growth rate. This also helps to prevent spilling when the fish are eating. Furthermore, RAS feed needs to be highly digestible, as this will promote a high feed utilisation and also helps to minimise the amount of faeces that the fish will produce. In salmonids, the growth rate is directly related to the energy level of the feed it eats. High-energy trout feeds give the best growth rate and the lowest FCR. Therefore, a RAS feed, by nature, has a high-energy level, although the exact optimum energy level depends on the life stage of the trout.

Did you know?

95% In RAS, 95% or more water is reused.

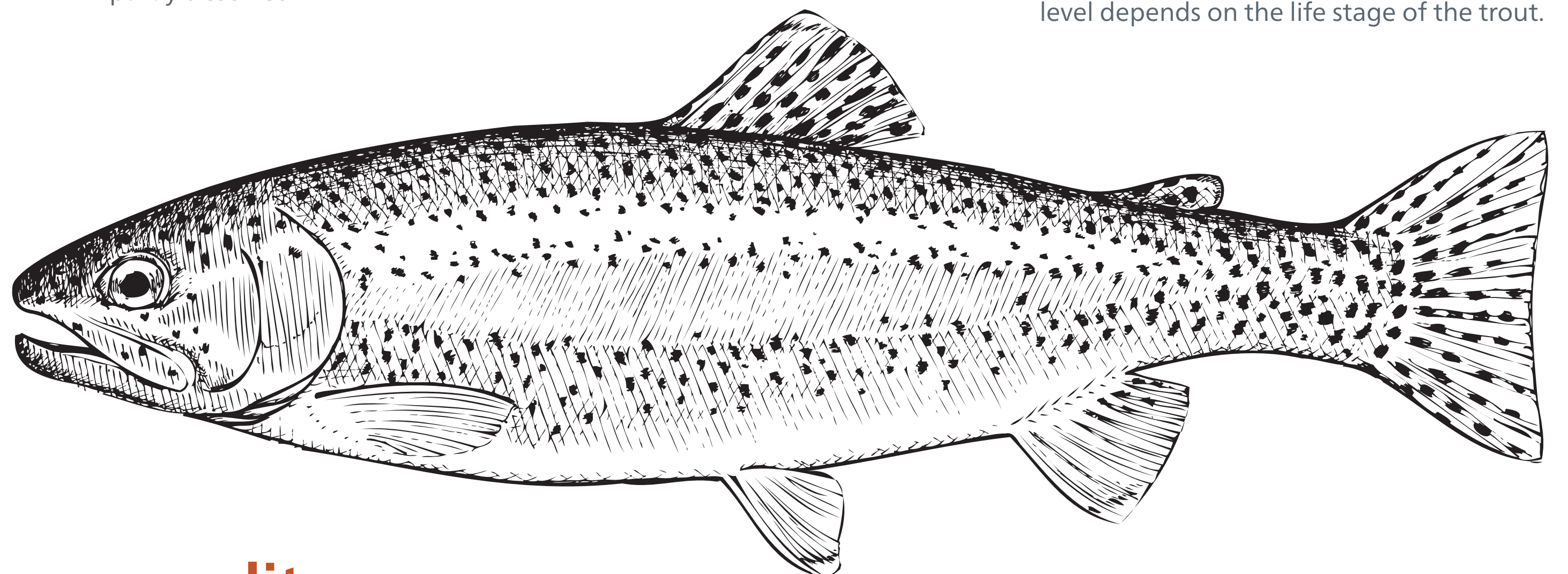
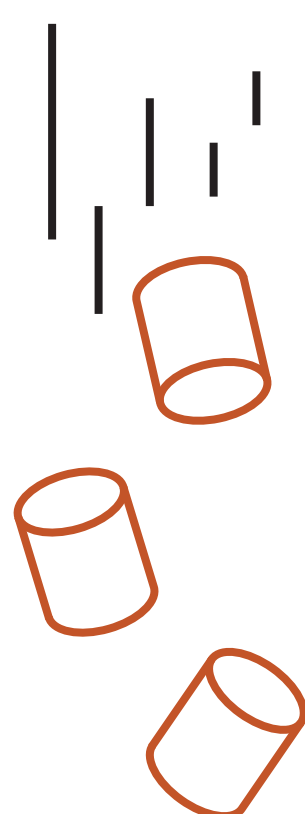


Uneaten, whole & stable

The pellets need to be water stable so that they do not disintegrate too quickly when spilt by the fish. Uneaten, whole, stable pellets can easily be taken out by the mechanical filters, but that is not the case when the pellets have disintegrated and partly dissolved.

Slooooo sinking...

The pellets need to be slow-sinking to make sure that the fish have sufficient time to eat the pellets. Our quality control department checks that every batch of feed produced meets these criteria.



Faeces quality

The faeces quality is crucially important as well. The faeces, just like the feed pellets, need to be large and firm and water-stable so that the mechanical filters can take them out quickly. Some feeds, especially certain plant ingredient-based feeds, result in loose faeces with many small particles that disintegrate and pollute the water no matter how well-designed the filters are. It is, therefore, crucial to know the digestibility of each ingredient, and also the type of faeces it produces in terms of volume and texture when formulating a RAS diet.

