

## Issue 2/2016: Olam instant coffee centres on growth in Asia, Europe



From left to right: freeze-dried, agglomerated and spray-dried coffee.

Although world demand for coffee has been growing at 1-2% for the last decade, there are market segments growing at a rate several times higher than the world demand growth. For example, consumption of soluble coffee is rising at a rate of 4% per annum.

Olam made the first adjacent move into instant coffee in 2007 when it began to shift its growth strategy towards integrating its supply chains into midstream and upstream activities selectively.

In this second issue of **Olam Insights** for 2016, our Soluble Coffee team relates how the business has been growing both organically and inorganically and shares how Asia and Europe will underpin future growth as Olam aspires to become a leading independent supplier of soluble coffee globally.

### Entry into soluble coffee: more than a one-step adjacency

By Vivek Verma, Managing Director & CEO, Coffee and Asset Management

Most of us can identify with the coffee shop culture and single serves – its rise over the past 2 decades now makes coffee in every form almost ubiquitous in the places we work and live. Despite world demand growing only at 1.3% over the last decade, rapid growth has been witnessed across certain segments within the broader picture.

Coffee producing countries, such as Brazil and Indonesia, are consuming 43 million bags (2.6 million MT) or 30% of the total world consumption of 143 million bags (8.6 million MT). Their consumption has grown by almost 40% from 31 million bags in 2005. Asia (excluding Japan) and the Middle East are experiencing a 3-6% growth in consumption as compared to developed markets growth at only 0.3%.

Product wise, consumption of soluble coffee is rising at a rate of 4% per annum while specialty coffee is growing at a clip of over 10% a year, most notably in the US.

The fact that the world needs to produce more coffee to satisfy demand has underpinned Olam's strategy of integrating our presence in the coffee supply chain. We have moved into upstream activity, setting up our own coffee estates to produce coffee on a traceable and sustainable basis. Within our core supply

**Today, Olam's share amongst independent suppliers of soluble coffee has grown on the basis of our enlarged capacity, as the market for independent suppliers has also grown.**

Vivek Verma, Managing Director & CEO, Coffee and Asset Management

#### More about the author: Vivek Verma

Vivek Verma is Managing Director and CEO of Coffee and Funds in Olam International. Vivek joined Olam in 1992 as a business manager and started Olam's India operations. He was transferred to the Singapore office in 1996 and was subsequently promoted to Managing Director where in addition to heading the Coffee business, he developed the Dairy and the Commodity Financial Services businesses. A member of Olam's Executive Committee of Olam International, the top leadership team in the Company, Vivek is also a member of the Executive Human Resource Committee. He holds a Bachelor of Technology from the Indian Institute of Technology, New Delhi, India.





chain operations, we created a specialty coffee division that capitalises on our procurement and marketing expertise to help roasters find exceptional, certified coffees. We see a growing fit between our upstream presence and the specialty coffee marketing.

We also moved downstream into soluble coffee to cater to the rising demand we see in emerging Asia and Central/Eastern Europe. The rationale was straightforward. Our entry into soluble coffee in 2007 was not only a one-step adjacency into a higher value-added activity where there is a sharing of customers, costs and channels, we were moving into a

space that is equivalent to one-third of the profit pool in the bean supply chain.

More importantly, we are extracting the full potential value from our capabilities in Robustas, the key ingredient in instant coffee, and scaling up where we have been able to differentiate our offering. As a strong player with origin presence in key producing countries across Asia, Africa and South America, we have a substantial market share, especially in the lower grade segment within Robustas, which is the core raw material for making spray-dried soluble coffee. That gives us an inherent competitive advantage.

Today, Olam's share amongst independent suppliers of soluble coffee has grown on the basis of our enlarged capacity, as the market for independent suppliers has also grown. Private labels and the food service segment continue to be the growth drivers for us due to a large concentration of private labels in Europe while those in developing economies are growing at a healthy rate of 6% each year. We are therefore well-positioned to capture growth from our configuration of assets, incorporating excellent locations, efficiency and product development.



Packing line for soluble coffee in jars, Seda Outspan, Spain.

## Making strategic choices: where we choose to play in soluble coffee

By Arun Sharma, Senior Vice President, Soluble Coffee

The global soluble coffee market has grown from approximately 530,000 metric tonnes (MT) in 2005 to 760,000 MT in 2014, an increase in total of 43% or 4% each year during this period. In absolute terms, the strongest growth came from emerging markets in Central and Eastern Europe, Middle East, South America and Asia (Source: LMC International, UK).

The consumption growth drivers over the past decade have been a combination of convenience, premium positioning, brand experience and the ability of manufacturers to innovate and provide new flavours. These factors are expected to continue to drive growth.

While 70% of the soluble coffee market's needs are met by the major brand owners, the remaining 30% or 228,000 MT estimated at US\$2 billion is supplied by the independent segment, which largely supplies bulk, non-branded soluble coffee. This independent segment has grown 43% or 4% per annum in volume terms from 160,000 MT in 2005 to 228,000 MT in 2014 and this is where Olam is positioning itself to become a leading independent supplier of soluble coffee.

### Making strategic choices

Olam's instant coffee business, which started in 2008 on a greenfield basis, has grown its capacity fivefold from 4,000 MT to 22,000 MT per annum by 2013. We built our competencies around strategic locations – Vietnam, which has a comparative advantage in producing cheaper and better soluble coffee, and Spain for value-added processing where we can access the private label market in Europe.

On the supply side, Vietnam is the world's largest producer of Robusta coffee and is also the most cost-competitive producer of soluble coffee compared to other origin soluble coffee producing countries such as Brazil and India. Additionally, Vietnam allows imports of both Robusta and Arabica beans from other origins for processing, which supports product development activities.

**“ We built our competencies around strategic locations – Vietnam, which has a comparative advantage in producing cheaper and better soluble coffee, and Spain for value-added processing where we can access the private label market in Europe. ”**

Arun Sharma, Senior Vice President, Soluble Coffee

Vietnam also enjoys proximity to the fast growing markets in Southeast Asia and benefits from being part of ASEAN as made-in-ASEAN products get a preferential rate of import duty into the ASEAN bloc and other countries in the far-east like Japan and Korea.

Vietnam is where Olam has been sourcing coffee beans in various upcountry locations

so it was a logical move to integrate into secondary processing, harnessing the strengths and assets we have built over the years. Today, we operate the largest independent soluble coffee facility in Southeast Asia.

Within 2 years of commissioning our plant in Vietnam, we invested further by trebling our capacity from 4,000 to 12,000 MT by 2013.

By 2014, we were fully utilising all our capacity.

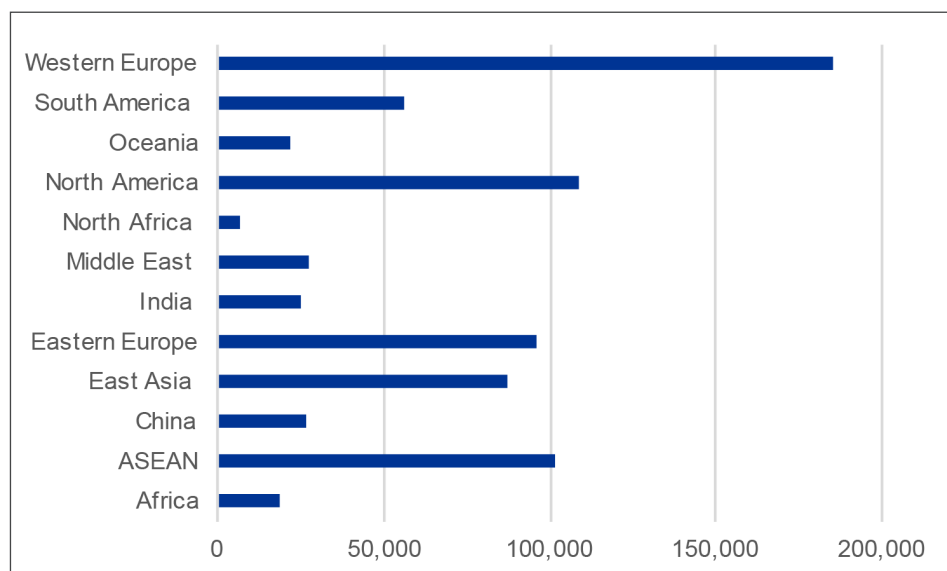
As our organic expansion in Vietnam was underway, in late 2012 through a court-sanctioned auction, we acquired Seda Solubles (now known as Seda Outspan), a leading producer of soluble coffee with a production capacity of 10,000 MT based in Spain. Despite its financial difficulties which led to its receivership, its customer and operating franchise remained intact. It also boasted a 10,000 MT packaging facility for private label coffee, an attractive segment within Europe given high barriers to entry for suppliers. Today, it is operating at full capacity.

The output from both our factories caters to the large markets in Asia, Middle East, East and Central Europe – markets where the strongest growth in consumption has been driving demand.

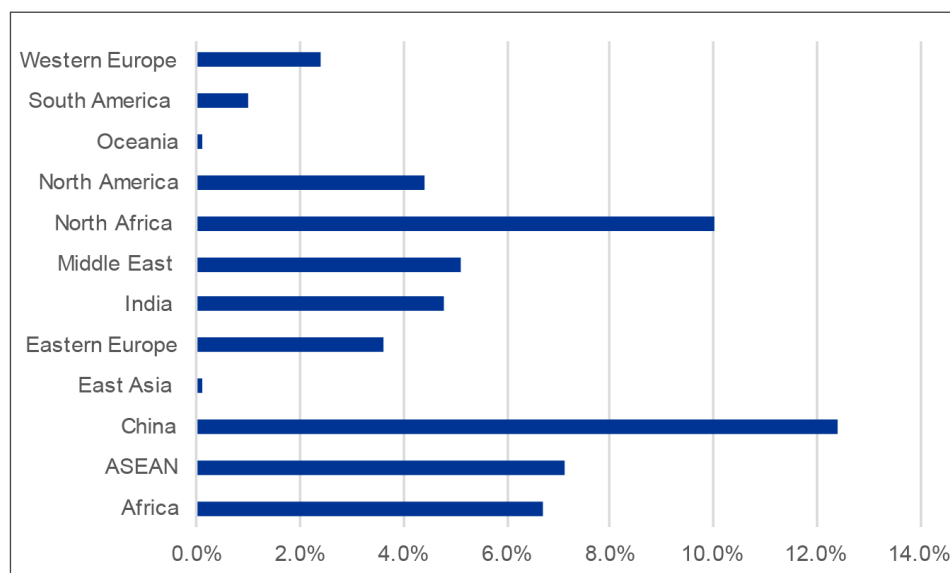
## Growth strategy

The supply-demand economics of soluble coffee underpins our growth strategy. This is so even if we assume a market growth rate of below 4%, or 2.7% (as forecast by LMC International) to 867,000 MT by 2019. Consumption of soluble coffee supplied by the independent segment would rise to almost 268,000 MT. Continuing growth in consumption, particularly for freeze-dried coffee which grows at twice the rate of spray-dried coffee, will likely put pressure on the existing production capacity.

As we aim to become a leading independent player globally, we continue to look to Asia and Europe for growth by increasing our capacity to address a growing Asia as well as deepening our presence in the private label industry in Europe. Our next move is to step-up our Vietnam capacity from the current 12,000 to 17,250 MT per annum, which should come onstream by 2018. In the meantime, our plans to improve operational efficiencies and product development will also enable us to achieve cost leadership and address new market segments that are focused on cost and quality.



Above: Soluble coffee consumption by region in 2014 (MT)



Above: Growth in soluble coffee consumption by region between 2005 and 2014 (MT)

## More about the author: Arun Sharma

Arun Sharma is Senior Vice President of the Soluble Coffee business at Olam International. He has spent nearly 20 years of his career in Olam by first joining Olam in Nigeria in 1996 as a branch coordinator and then moved to Olam Uganda in 1998 to be its country head until 2001. Thereafter, he was transferred to Olam Singapore as a coffee trader and rose to become the head of the Soluble Coffee business in 2007. Arun is a civil engineer by training and holds a Master in International Business from the Indian Institute of Foreign Trade (IIFT), New Delhi.



Cafe Outspan in Vietnam.



## Operations: competitiveness through cost savings and efficiency

By Shankar Rao, Senior Vice President,  
Manufacturing & Technical Services

Olam's end-to-end soluble coffee capability now includes 2 soluble coffee manufacturing plants, strategically located in Vietnam and Spain.

Just 2 years after our decision to enter the segment, we set up a greenfield 4,000 MT per annum plant in Vietnam. Successful production and increased demand led to the expansion of our capacity to 12,000 MT per annum. Now, the plant produces an extensive array of soluble coffee including spray dried, agglomerated, freeze dried and frozen extract forms, which are packed in bulk format.

Our other plant in Spain, which we acquired in end-2012, has a capacity of 10,000 MT per annum. Besides producing soluble coffee in spray dried, agglomerated and freeze dried forms, it has the added capability to pack both in bulk and in retail private label formats like jars, pouches, sachets and stick packs at a world class packaging facility.

### Track record in project management

As in other high asset intensity processing businesses, strong project management capability is key. Our commitment to the soluble coffee production business included a significant amount of fixed capital to build the Vietnam plant during phase 1 in 2008-09; phase 2 in 2011-12 as well as continual quality improvement and cost savings

initiatives across the development cycle. Similarly in Spain, we have undertaken several medium size capex projects to address quality, environmental, health and safety (QEHS) infrastructure bottlenecks and cost savings.

Having the right physical assets is only one aspect of successful industrial processing. We also paid close attention to developing "soft" assets by assembling and training a world-class in-house project management team. Their collective experience and track record in project management continue to enable us to deliver on all phases of our projects on-time and within budget.

### Focus on ongoing operations

The processing of soluble coffee requires rigorous attention to minute production details to optimise quality. It consists of 5 steps: 1) roasting of green beans; 2) extraction of roast and ground coffee; 3) aroma recovery; 4) evaporation of weak extract; and 5) drying of concentrated extract to produce spray dried or freeze dried coffee. Agglomerated coffee is produced by steam wetting and drying the spray dried coffee. Frozen coffee extract is produced by freezing the concentrated extract.

In both plants, we keep a razor sharp focus on continually improving and optimising production.

In Vietnam, we began operations in our greenfield plant in 2009 with challenges in achieving the targeted capacity, quality and efficiency to overcome. To do this, we strengthened the operations team and developed a clear roadmap with incremental targets to implement progressive work

practices. This included workplace organisation, basic equipment condition maintenance and preventive maintenance (5S/AM/PM), shift meetings between operators and supervisor, a daily operations review meeting on the shop-floor and quarterly communication meetings where targets and results were shared. Over time, these strong engagement initiatives coupled with world-class plant infrastructure have resulted in significant improvement in plant performance across all fronts, including quality, cost, service, safety, sustainability and staff.

In Spain, the focus after our acquisition was to integrate people and processes and simultaneously address QEHS infrastructure bottlenecks. This integration plan has been successfully implemented, and capacity utilisation is now close to 100% with best-in-class resource efficiencies. Regular communication between the operations and sales teams has helped in delivering a changed product mix which was a critical business imperative. With these encouraging results, further investment for enhancing capacity, quality and efficiency is in the pipeline.

Our success in maximising capacity utilisation is rooted in our focus on operating the plants at best-in-class machine efficiencies (OEE or overall equipment effectiveness), improving yield to industry leading levels by adopting innovative technologies and reducing specific energy consumption by more than 18% through implementation of energy audit recommendations. All of this has been possible only through the collective efforts of our 530 colleagues at our plants in Vietnam and Spain.

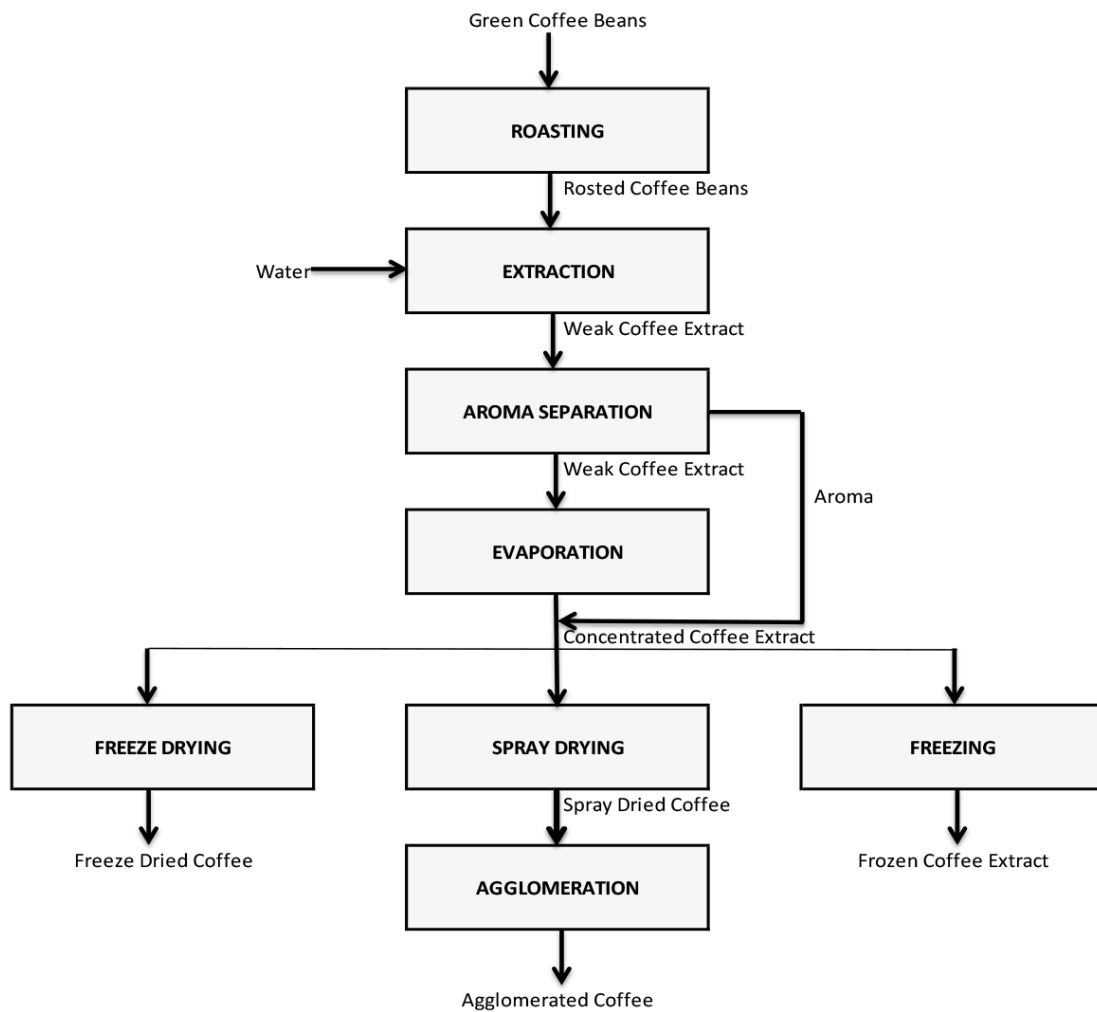


Concentrated coffee extract for producing freeze dried coffee, a premium variant of soluble coffee.

**Our success in maximising capacity utilisation is rooted in our focus on operating the plants at best-in-class machine efficiencies, improving yield and reducing specific energy consumption.**

Shankar Rao, Senior Vice President,  
Manufacturing & Technical Services

# SOLUBLE COFFEE PROCESS FLOW CHART



## More about the author: Shankar Rao

Shankar Rao is Senior Vice President of Manufacturing & Technical Services for Olam International's Asia operations as well as Coffee, Dairy and Sugar operations. He joined Olam in 2010 in Vietnam where he was responsible for its soluble coffee operations. During his 3-year stint, he successfully stabilised the operations and completed the capacity expansion. He moved to Singapore during 2013 to take on his current role. Prior to joining Olam, Shankar was working for Unilever in India for 23 years in their various food and personal care categories. Shankar is a Chemical Engineer by training from the Indian Institute of Science, Bangalore.



## Case study 1: improving yield

In soluble coffee processing, raw material cost accounts for 75% of the cost of sales. Typically 2.5 MT of green coffee beans are required to produce 1 MT of soluble coffee. In industry parlance, this ratio is referred to as 'yield'. At current prices, every 1% improvement in yield results in savings of US\$45 per MT. Yield depends on maximising extraction of soluble solids by optimising 3 key parameters, namely time, temperature, particle size at extraction step and minimising losses of soluble solids post extraction step by recovering and recycling the soluble solids.

During phase 2 capacity expansion in Vietnam, we selected an innovative technology which helped in achieving both objectives and improving the yield to industry-leading levels. After achieving this success in Vietnam, we replicated the initiative on an existing line in Spain and have achieved similar success in improving the yield to industry leading levels.

## Case study 2: reducing energy use

Soluble coffee processing is an energy intensive process and requires 62 GJ of energy to produce 1 MT. In Vietnam, over the last 3 years, proactively implementing energy conservation measures has helped reduce energy consumption by 18% from 62 to 51 GJ per MT. These measures include heat recovery from roasting, extraction, air compressors exhaust streams, energy efficient lighting, variable frequency drives and auto cleaning of chiller condensers. This energy use reduction has in turn helped to reduce carbon emissions as well as generating cost savings. In simple terms the annual energy reduction achieved is equivalent to about 4,600 households' annual electricity consumption. Similarly in Spain, we have conducted an energy audit, to identify several energy conservation measures which will help in reducing consumption by 13%.



Our product development methodology begins with cupping coffees.

## Driving product innovation and customer engagement

By Marcos do Espirito Santo, Product Development Manager, Soluble Coffee

As our Vietnam plant operations grew from strength to strength after the first roast in 2009, Olam took the view that continual innovation would be critical to meet and anticipate customer demand. As such, just before plant capacity was tripled to 12,000 MT per year in 2013, we set up a separate function to institutionalise product development within our Vietnam facility at Café Outspan Vietnam. In 2013, we expanded our R&D activities into a second location after the acquisition of Seda Solubles in Spain.

With the evolution of our role and capabilities, our product development team now supports the growth of the soluble coffee division by developing products that anticipate and meet quality and cost requirements for our customers across all market segments. Our strong six-member team leverages its diverse expertise to develop innovative insights and products. With the recent launch of a common platform across both locations, we expect to be able to continue building a databank that will allow us to accelerate understanding and development of actionable insights across all segments of the soluble coffee market.

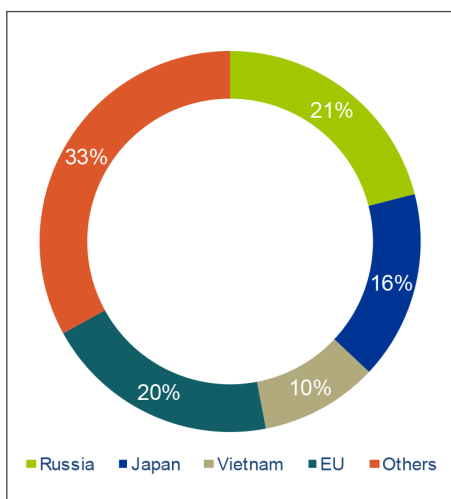
One of our unique strengths is our sourcing ability. Olam's extensive origination capability across 21 countries around the global coffee belt means that we have access to the full palette of flavours to work with. Some of our recent successful innovations include identifying strategic opportunities for standard spray-dried coffee qualities with competitive

cost, as well as high-end premium freeze-dried coffees. High value-added certified products (such as UTZ, Rainforest) and special single origin products (such as Arabica Mandheling, Colombia and Ethiopia) are also in the portfolio.

Our work is seamlessly channelled across both plants – we selectively direct development exercises to the plant that has the competitive advantage to be able to deliver the best solution in terms of target taste, customer's desirable cost level and delivery time.

### Strong customer relationships

The success of our work is contingent on the strong relationships we have with our customers. Through deep customer engagement, our Vietnam factory now supplies bulk packs as an industrial ingredient to brand owners around the world, including Japan, EU, Russia and Southeast Asia.



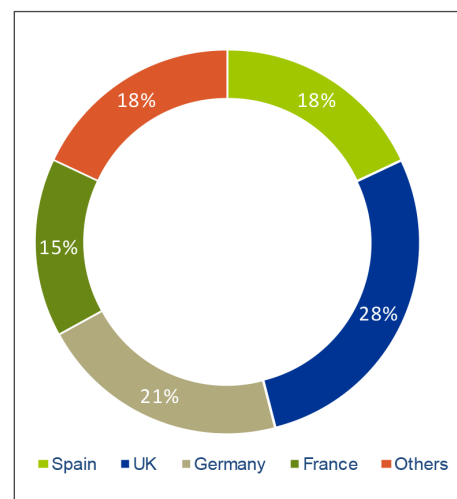
Above: Vietnam soluble coffee sales volume by country of destination, 2015.

**“ The success of our work is contingent on the strong relationships we have with our customers. ”**

Marcos do Espirito Santo, Product Development Manager, Soluble Coffee

Japan is an important destination of our products from Outspan Vietnam, responsible for about 16% of our volume in 2015. Canned coffee is the main application of our concentrated coffee extracts and spray-dried coffees in this market. We have focused on direct technical contact with key customers in Japan to understand their challenging requirements.

In Spain, while bulk pack sales are used as industrial ingredients by a number of our customers in the EU, most of our products are



Above: Spain soluble coffee sales volume by country of destination, 2015.



retail packs sold to retail chains primarily in Western Europe, including in the UK, Spain, France and Germany for their private labels.

Seda Outspan has been steadily regaining its share in the European retail market, its *raison d'être*. This has been a result of our efforts of focusing on the strong British retailing industry and the German retail powerhouses. The joint approach of the sales team along with product development efforts has helped obtain key accounts, especially in the UK. Seda Outspan has doubled its volume to the retailing market from 30% in 2013 to 60% in 2015.

## Collaborating with our customers

Our policy is to engage and cooperate closely with customers from start to finish – with our team in Vietnam working closely with Asian customers and our team in Spain engaging closely with European retailers. This starts in the early development stage where we jointly define development targets by carefully identifying their requirements before converting them into technical parameters for the manufacturing plants.

We have created a product development methodology that begins with cupping coffees. This involves identifying pre-defined attributes and their intensity level, as we have to relate results to the green coffee selection and manufacturing process.

Next, is the industrial trial, where the most critical developments take place. This involves the team defining the key processing steps – types of raw material and ratio, roasting level, extraction type, aroma recovery and drying. All trials are jointly agreed with the operations team and usually run within 1 month from ordering. The team then assesses all trial samples internally before submitting it to customers for validation. Once the customer approves the trial, finished product specifications are jointly agreed for smooth delivery of the first shipment. After this, the product becomes part of our routine operations.

Moving forward, we will continue building our capabilities, expand our applications knowledge and move into applied research, while also increasing and strengthening customer touch-points for sequential

successful developments. We also expect to be able to move our R&D capabilities to the next level by leveraging Olam's presence across the agri-commodities complex.



Olam's soluble coffee available in a wide range of containers, PET bottles, glass jars, sticks and pouches covering all the needs of B2B customers and final consumers.

## More about the author: Marcos do Espirito Santo

Marcos do Espirito Santo is Product Development Manager at Café Outspan Vietnam, the wholly-owned subsidiary of Olam International which operates the soluble coffee facility in Vietnam. He heads the global product development of the Soluble Coffee business. Marcos joined Olam in 2011 with 18 years of experience in the soluble coffee industry in Brazil. His first challenge was to create the product development framework and spearhead product development in Vietnam. Later on, he became responsible for product development in Spain after the acquisition of Seda Solubles. Marcos is a Chemical Engineer from the State University of Rio de Janeiro, Brazil.



## Facts on Olam Soluble Coffee

Total instant coffee capacity:	22,000 MT p.a. (Vietnam: 12,000 MT p.a; Spain: 10,000 MT p.a)
Vietnam capacity by type:	Spray-dried: 8,000 MT p.a. Freeze-dried: 4,000 MT p.a.
Spain capacity by type:	Spray-dried: 4,500 MT p.a. Freeze-dried: 5,500 MT p.a.
Production capacity utilisation rate:	100%
Packaging capacity:	Spain: 10,000 MT p.a. Russia: 3,000 MT p.a.
Employee strength:	Vietnam: 290 Spain: 240
Certifications:	Vietnam: BRC, Kosher, Halal, ISO 14001 Spain: BRC, IFS, Kosher, Halal