Most vendors used between ten to twenty 10 kg bags of whole fresh potatoes every day, whereas only a small proportion of the vendors purchased pre-sliced, frozen potato chips. Purchasing frequency differed from once every day or two, or weekly depending on demand. When asked why they prefer whole fresh potatoes, vendors responded that fresh potatoes often deliver a better final product as pre-cut potatoes are often too floury and costly.

Raw product attributes which were highlighted as of importance included large or large/medium tubers, without blemishes, well-shaped, smooth and yellow. Fresh potatoes are stored for up to seven days in bags on the floor of the vendor structure. It is interesting to note that labour to prepare (as part of the economy of scale) is often ignored as a contributing factor, and may be due to the lack of true economic understanding of these vendors.

The complete preparation and cooking process in these vendors were recorded and will be used to develop a standardised cooking method to use when preparing slap-chips for further sensory evaluation in the laboratory under controlled conditions. The attributes of importance for consumers will be used during sensory evaluation and guide the sensory panel to formulate and measure the attributes of importance or classifying eleven South African cultivars on their ability to satisfy slap-chip consumers, these cultivars will include Avalance, BP1, Buffelspoort, Darius, Fabula, Fianna, Mondial, Up-to-Date, Valor and Vanderplank.

South Africa consumer market
South Africa has a dynamic consumer market where consumers gradually move towards higher socioeconomic statuses (higher living standards) driven by economic growth as well as socio-economic empowerment. This vast and growing consumer market in South Africa presents unique opportunities for the potato industry, and it is essential that this market is understood and that their needs (and demands) are met by the food industry.

The way many South Africans describe their favourite slap-chip is as follows:
- Colour: golden, yellow, light brown, not pale
- Shape/form: Fingers
- Size chips: 6 - 13 cm length (1 X 1 cm thickness)
- With salt and vinegar or chip spices
- Texture: Most prefer “slap” chips, few request crisp & firm chips, Crispy outside, soft on the inside, not oily; crisp to the bite, then soft on inside. Crispy or slap as customer prefers, not too oily.

This description clearly does not conform to the description of the internationally known French Fry, that is required to be crisp direct from the fryer as well as after spending time in the serving dish.

In order to adequately profile South African cultivars for slap-chip preparation in the informal sector, Potatoes South Africa funds a study by the University of Pretoria in collaboration with the Agricultural Research Council to perform a target market investigation. The aim of this part of the study was to determine the most important attributes and characteristics as dictated by the end consumer. Insights obtained aid in the development of a standardised cooking method to replicate common practice during slap-chip preparation in this market.

As a first step, a questionnaire was developed and tested, after which informal slap-chip vendors from various locations were questioned and visual records were taken of the settings at which slap-chips were sold. Slap-chips are sold by various types of informal vendors, from the very small-scale vendor to the corner-café. A pre-questionnaire was used to screen vendors for application within this study. Although numerous small vendors exist, the study focussed on vendors selling more than 100 kg of potatoes weekly.

Attributes of significant importance to the vendor included that fresh potatoes should not have any blemishes, be smooth and well-shaped, and have a yellowish colour. This market snapshot gave insights into the type of clientele (low to very-low walk-in consumers) of slap-chip vendors as well as the ideal final product. A summary of the findings indicated that the informal slap-chip vendors prefer end-products with a golden-yellow or light brown colour, with a slap-chip texture (crispy on the outside, but soft on the inside) without being too oily. Only a few customers preferred a crisp or firm chip.
The informal sector represents a prominent proportion of the consumer market. According to the 2011 report of the Department of Agriculture, Forestry and Fisheries, the informal sector is responsible for the distribution of 30% of all fresh potatoes sold on the fresh produce markets and for approximately 50% of all potatoes sold (DAFF, 2011). Van Zyl and Wait (2012) reported even higher values (Chips, Vol 26 No 5, Sept/Oct 2012), stating that the informal sector bought 49% of the fresh potatoes sold on fresh produce markets in 2008/2009, increasing to 53% in 2011/2012, representing more than half of the potatoes sold on the market.

Potato South Africa’s classification system
The classification system for South African potato cultivars was implemented in 2011 following extensive sensory and consumer research conducted since 2006 by the University of Pretoria in collaboration with the Agricultural Research Council. The sensory properties, physical measurements and chemical analyses of eleven potatoes cultivars (Avalance, BPI, Buffelspoort, Caren, Darius, Fabula, Fianna, Mondial, Up-to-Date, Valor and Vanderplank) was used to describe their intrinsic and extrinsic quality, determining their cooking characteristics and what each variety can best be used for, i.e. boiling, roasting, chipping, microwave and mash.

Although chipping was included as a cooking method in the initial classification system, this method is not applicable to the local informal slap chip industry. Slap chips are unique to the South African market. To be internationally competitive, it remains important for an industry to be locally relevant. As a result potato producers requested Potatoes South Africa to scientifically investigate this unique potato product.