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HAND HARVESTING POTATOES

You can use a range of manual techniques to harvest potatoes. Each method has body strain risks. It is heavy, repetitive work especially when harvesting a crop over many fields (typically in summer heat).

Here are two methods I observed while WWOOFing at Global Farm Puremi in South Korea:

First pull up the plants to clear the row and remove any plastic sheeting (being careful not to trip or collect soil as you do) then use one of these methods:

The first - "Halmoni" (할머니) or grandma's way: Here you straddle the row (mounded earth) sitting on small round cushion (with straps around your thighs to hold it on). You hold your body in a bent position and twisting of the trunk needs to occur. Your hand is holding a hoe e.g. in Korea you hold a Ho-mi - a small wedge shaped trowel with a long handle. You use the ho-mi in a scooping action side to side across the row to find the potatoes. You harvest potatoes in one area of the row and then move your cushion up the row to harvest the next area. Cycle time 45-60 seconds. 3 rows took 2.5 hours (rows were about 30 m in length).

You pull out the potatoes from the soil with the free hand as you loosen them with the hoe then place the potatoes behind you for later collection. It's useful to place them on the row beside (an already harvested row) to reduce the number of places to collect potatoes later as you will be tired and will want to reduce the need for bending.

Tips to make the first method easier: Put weight on your feet as you lean forward to take strain off your back. If the ground is wet, use two hands on the tool to scrape. Put the harvested potatoes off to one side to reduce twisting and shoulder movement.

The second - "Oppa" (오빠) or older brother's way (*referring to the male owner of the farm who was older than me*): here you squat by the side of the row and quickly scrape the dirt across the mound toward you. You pull the potatoes with the ho-mi out of the dirt as you go with a flicking action. This way is much quicker although a novice risks damaging potatoes more. You stay in a squat position and use a lot more force with your arm holding the ho-mi. You may also have to dig through the loosened soil to find the potatoes as they tend to get reburied. You can duck walk down the row in a squat as you go. This way is difficult for most westerners not used to squatting.

In western gardening methods, you harvest potatoes using a long handled fork or spade to lift the soil under the plant and loosen the soil so you can harvest potatoes; or you can 'bandicoot' them by pushing your hand into the soil to find the potatoes leaving the plant intact. The latter is fine if you

have loose soil and are just getting some potatoes for dinner but not as a crop harvesting method as it's too slow.

Another risk with harvesting potatoes for pickers is that the potatoes go mouldy if the ground is very wet. You don't want to breathe in that mould so either leave them to rot or use a long handled hoe and some sort of mask over your nose and mouth to protect your lungs.

After you have picked all the potatoes, you have to pick them up and move them to a sorting area. You will be tired and bending now will be even more hazardous as your ligaments and back discs are stretched. The easiest way is have someone else do it. If that's not possible, take your time and don't stay bent over all the time. You can reduce the places you pile the potatoes when harvesting on the rows or have someone move a bucket along with you as you pick. Put the collected potatoes on a barrow, or use a big pellet bag hoisted on a tractor (although these can break!). Sorted potatoes go into boxes on a forklift pellet or sort and box them in a shed in the shade.

As it is typically a summer harvest job, cover up your head and skin and stay hydrated with water if working in the heat. Stay energised with boiled potatoes!

The going rate for '(g)kamja' 감자 감자 or potatoes in Korea was about 30,000 KRW for 20 kg or 40 large potatoes (about \$34 AUD or 85c each). It took 5 days of labour to pick a small field with about 10 people helping out over the week. For comparison, a basic tasty family restaurant meal in Seoul Korea will set you back between 3000-5000 KRW.

Body Stress rating: **very high risk manual tasks** - each method is a very high risk manual task by ergonomic standards so you need to modify how you do the task or how long you do the task if you are prone to injury (back, knee, shoulder) or not very fit.

Rapid Entire Body Assessment, REBA score: 11 doing it the first way (12 if you squat by the side in the second method)

Photos

			
<p>The potato field</p>		<p>Pulling up the plastic row cover. Halmoni (grandma) already hard at work.</p>	
			
<p>Halmoni (grandma) sitting on the cushion piling the harvest behind her as she goes.</p>		<p>Ho-Mi tool used widely in Korea</p>	
			
<p>A row done with bum impressions</p>		<p>The day's harvested potatoes ready for sorting and boxing</p>	
			
<p>Kamja (potatoes in Korean) for dinner</p>		<p>Korean crisp packets recognise the farmers' efforts</p>	