**“Pros and Cons” of sustainable fabrics - part 1**

For the assessment of the substances, the pros and cons are first mentioned and then a multi-criteria analysis is completed to make a top 3 for the best substances.

This analysis will discuss the following topics: Water consumption, land use, Chemical use, is it good and biodegradability / reuse.

Which are rated on a scale from 1 to 5 with 5 being the best and 1 the only.

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| **FABRICS** | **PROS** | **CONS** |
| **Lyocell** | * Biodegradable and made from renewable raw materials: eucalyptus cellulose * Strong fabric, long lasting * Circular production process: 99% of the water from the production process is reused * Does not contribute to plastic soup * Almost all of the water is recycled | * Processing the wood into usable material takes a lot of energy * It needs a lot of chemicals. |
| **Bamboo** | * It grows fast * You can grow a lot of them * The fabric is very soft. * The fabric is antibacterial that partially prevents sweat stains. | * Needs a lot of chemicals to produce the fabric |
| **Recycled Polyester** | * It is not made from a plant so it takes less water. * Instead of using a climate-unfriendly substance, it ensures that it is precisely those substances that are removed by recycling it. So less plastic bottles, cups, etc. * About 49% of all clothing that is made is partly made of Polyester, so if people switch to recycled polyester, that is a big change immediately. * Firm | * When washing polyester in general, the garment loses millions of plastic fibers, which later enter the water through sewers. |
| **Hemp** | * Grows fast * Does not need pesticides or insecticides * Needs little water around 2100L per Kilo (Cotton needs 8000L for one kilo) * Needs very little land area. Cotton needs three times as much land for the same amount of fabric. * The fabric is antibacterial. * 100% Biodegradable | * The fabric can sometimes be very stiff, especially if the garment is entirely made of Hemp. |
| **Seacell** | * Fully Biodegradable. * Procedure is completely sustainable. * It does not need fresh water * Antibacterial | * Not very well-known yet |

**“Pros and Cons” of sustainable fabrics - part 2**

Water consumption, land use, Chemical use, Quality and biodegradability / reuse. Are being rated on a scale from 1 to 5, per fabric. The outcome of this rating can be read in the undermentioned assessment table.

**Review**

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|  | **Water consum-ption** | **land use** | **Chemi-**  **cal**  **use** | **Quality** | **Biodegrad-**  **able / reuse.** | **cumulative** |
| **Seacell** | 5 | 5 | 4 | 4 | 5 | 23 |
| **Hemp** | 4 | 5 | 5 | 2 | 5 | 21 |
| **Recycled polyester** | 4 | 4 | 3 | 4 | 4 | 19 |
| **Lyocell** | 3,5 | 4 | 2 | 4 | 4 | 17,5 |
| **Bamboo** | 3,5 | 4 | 2 | 3 | 4 | 16,5 |