# Cerita Biochar di Petani Sayuran

Ulya Zulfa

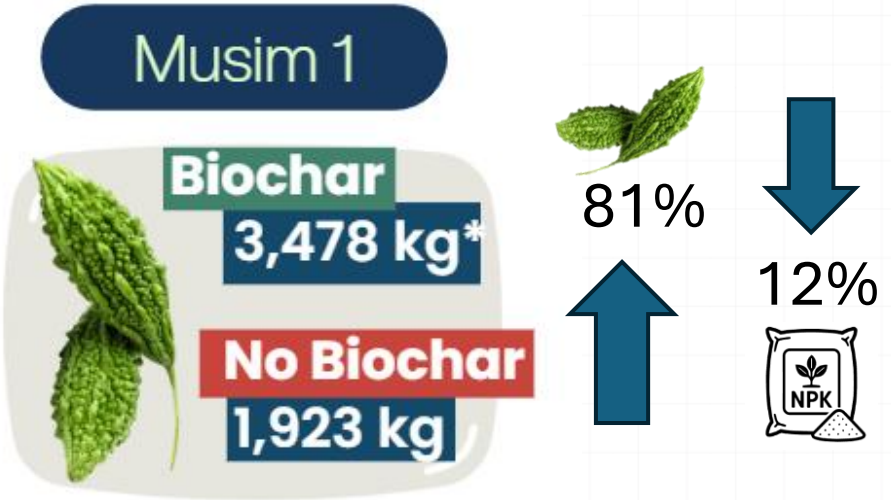


Rukan Avenue No. 8-157, Jakarta Garden City, Kec. Cakung,
Kota Jakarta Timur, Daerah Khusus Jakarta, Indonesia-13910

Yayasan Bina Tani Sejahtera @binatanisejahtera www.binatani.or.id +62 8111 074 321 info@binatani.or.id

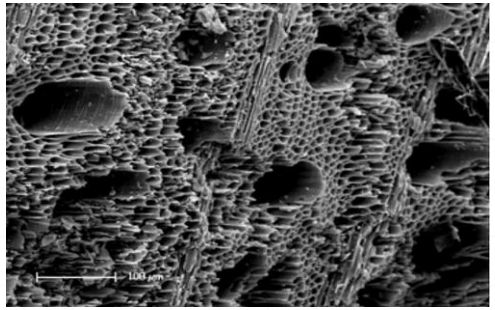
# Bu Fatonah – Petani Horti Grobogan

Tebar dan perataan Biochar di perakaran



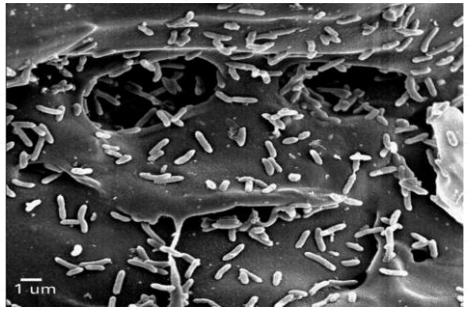

**Resep :**

1. **Varietas :** Pare Lipa F1 Cap Panah Merah
2. **Dosis biochar :** 4 ton/ha
3. **Bahan campuran charging :** kohe ayam matang, kohe kambing, POC, wajib air
4. **Masa charging biochar :** 8 hari inkubasi
5. **Aplikasi biochar :** saat olah tanah



Pori-pori Biochar **Kosong**

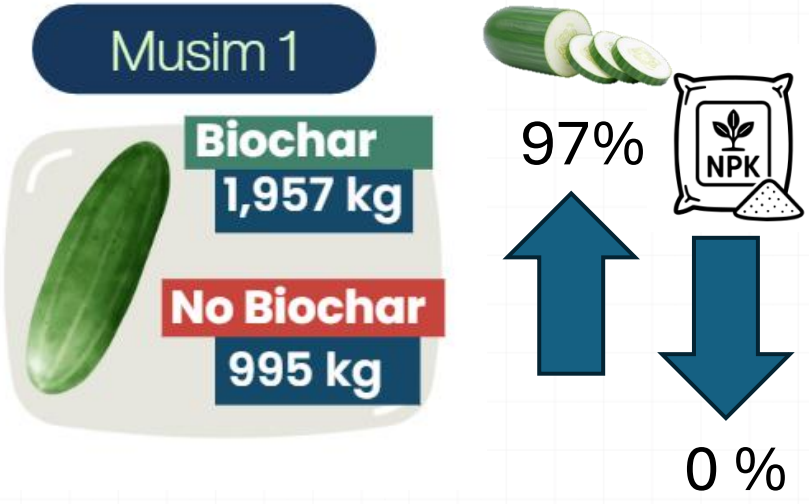
**Charging**



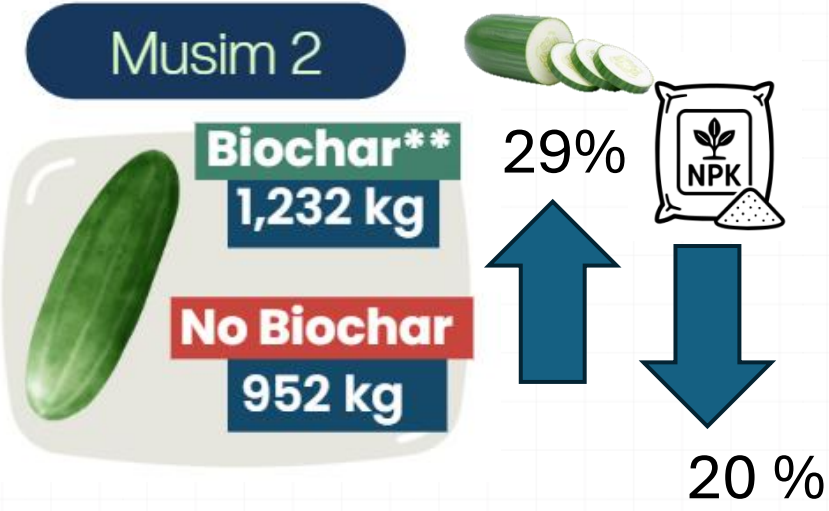

Pori-pori Biochar **Terisi**

Sumber : Glodwska, Wozniak (2016)

# Pak Mulyo – Petani Horti Batang

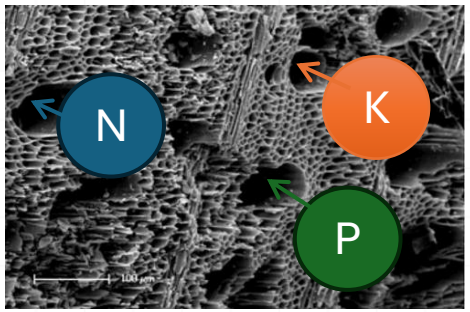




Tanpa Olah Tanah




**Resep :**

1. **Varietas :** Timun Erina F1 Cap Panah Merah
2. **Dosis biochar :** 4 ton/ha
3. **Bahan campuran charging :** pupuk kimia, wajib air
4. **Masa charging biochar :** 12 - 24 jam inkubasi
5. **Aplikasi biochar :** saat olah tanah

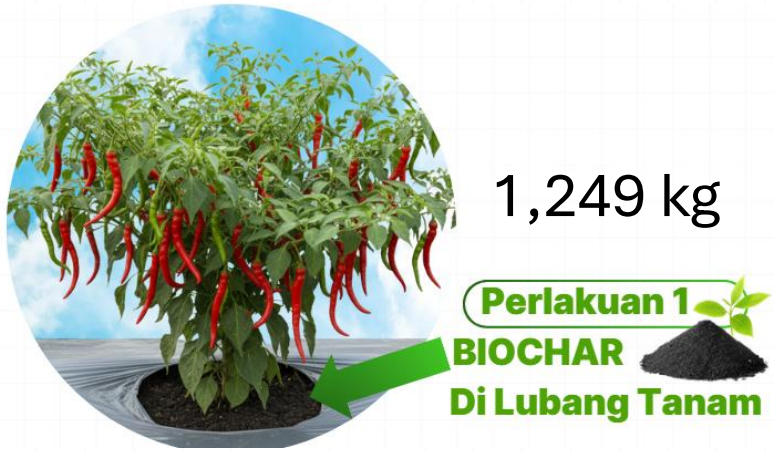



Pori-pori Biochar **Terisi**

Tebar dan perataan Biochar di perakaran

Sumber : Glodwska, Wozniak (2016)

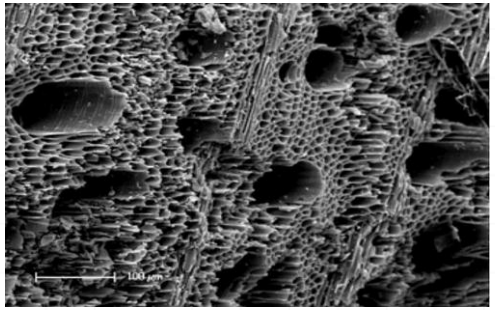
# Pak Riasan – Petani Horti Malang





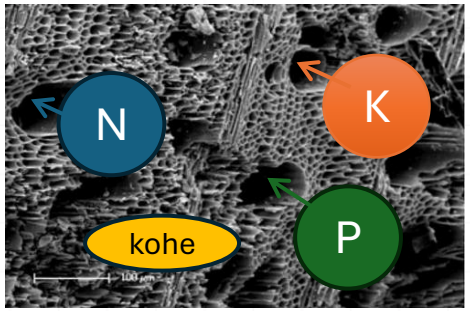
**Resep :**

1. **Varietas :** Cabai Tangguh F1 Cap Panah Merah
2. **Dosis biochar :** 2 ton/ha (hanya setengah dosis rekomendasi)
3. **Bahan campuran charging :** pupuk organik, kohe, wajib air
4. **Masa charging biochar :** 12 - 24 jam inkubasi
5. **Aplikasi biochar :** lahan janda bekas timun



Pori-pori Biochar **Kosong**

Charging




Pori-pori Biochar **Terisi**

Sumber : Glodwska, Wozniak (2016)

# Kesimpulan Penggunaan Biochar :

## Do (Dilakukan)

- Biochar wajib diaktivasi/di-charging

**Charging (3C = Campur -> Ces -> Cem)**

1. **Campur :** biochar dicampur bahan lain, wajib air
2. **Ces :** pori-pori mulai terisi
3. **Cem :** didiamkan hingga pori-pori terisi sempurna

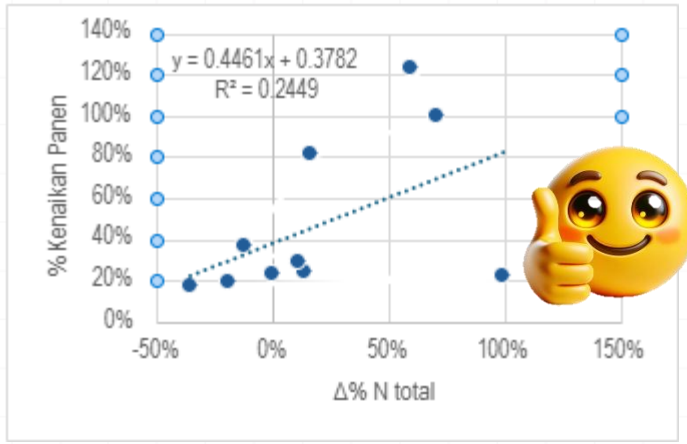
- Diaplikasikan ke lahan dalam keadaan lembab, terbaik saat olah tanah
- Pemakaian biochar cukup 6 – 12 bulan sekali

## Don't (Haram Dilakukan)

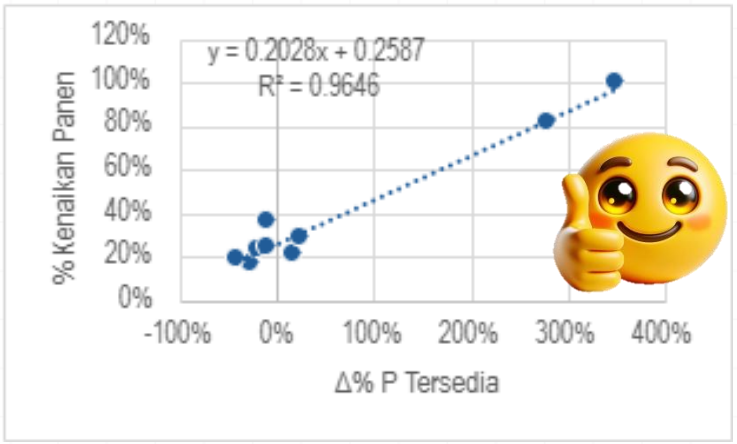
- Pori-pori biochar mentah / kering / tanpa aktivasi malah akan menyerap pupuk/nutrisi yang sudah ada di lahan


Tonton Video : apa itu biochar, manfaatnya, dan beberapa tips penting sebelum mulai memakai biochar.

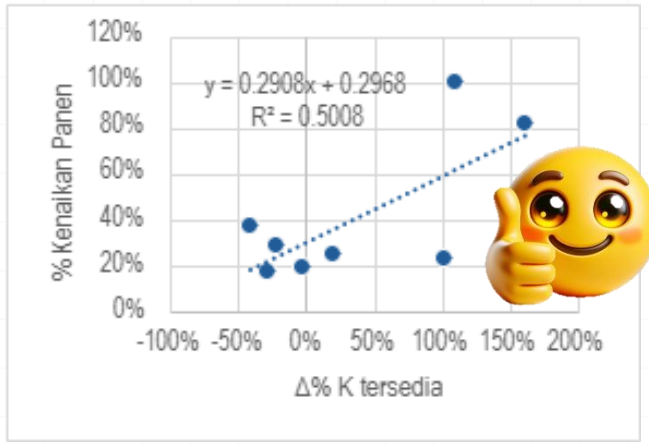
# Bukti Nyata dari Laboratorium Uji Tanah




Nitrogen




Fosfor

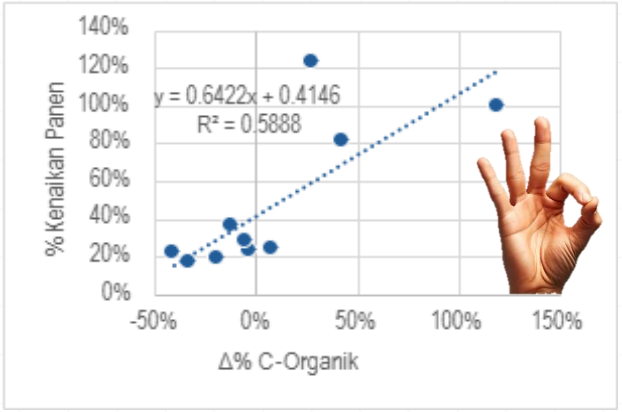



Kalium

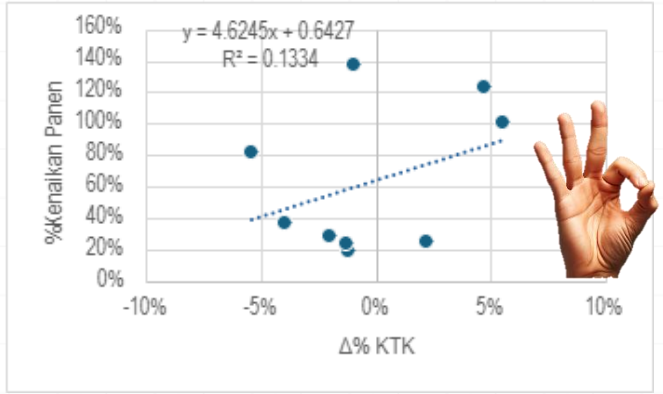
**Biochar terbukti :**

- Buffer pH tanah, di rentang ideal (5.5 – 7.5)
- Nutrisi N, P, K lebih tersedia
- Karbon organik tanah meningkat
- Kapasitas Tukar Kation menjadi lebih tinggi

**Petani dapat menghemat pupuk kimia dan tetap panen optimal**




C-Organik




Kapasitas Tukar Kation

# Terima kasih



Rukan Avenue No. 8-157, Jakarta Garden City, Kec. Cakung,
Kota Jakarta Timur, Daerah Khusus Jakarta, Indonesia-13910

Yayasan Bina Tani Sejahtera @binatanisejahtera www.binatani.or.id +62 8111 074 321 info@binatani.or.id

# Demoplot Analysis (No Biochar Vs Biochar, Agronomic Aspect)

| PLANTING SEASON 1 | Varietas | No. Of Demos | Potential Yield 500 sqm | NO BIO - % Potential Yield | BIO - % Potential Yield | NO BIO - Yield (kg) 500 sqm | BIO - Yield (kg) 500 sqm | Improvement Yield | Fertilizer Reduction |
|---|---|---|---|---|---|---|---|---|---|
| **Big Chili type** | Baja MC F1 | 1 | 900 | 15% | 17% | 132 | 150 | 14% | 0% |
| | Gada Evo F1 | 1 | 900 | 54% | 57% | 490 | 510 | 4% | 17% |
| **Bitter Gourd** | Lipa F1 | 6 | 1,750 | 57% | 97% | 1,000 | 1,690 | 65% | 7% |
| **Cauli Flower** | AQUINA F1 | 2 | 1,250 | 29% | 42% | 362 | 530 | 37% | 20% |
| | PM 126 F1 | 4 | 900 | 30% | 37% | 270 | 332 | 25% | 1% |
| **Cucumber** | Bandana f1 | 1 | 2,000 | 21% | 26% | 419 | 525 | 25% | 0% |
| | ETHANA F1 | 1 | 2,250 | 3% | 7% | 70 | 166 | 137% | -106% |
| | Wulandari F1 | 4 | 1,000 | 97% | 140% | 971 | 1,400 | 69% | 14% |
| | Erina F1 | 11 | 2,500 | 18% | 31% | 454 | 768 | 66% | 20% |
| | New Metavy F1 | 3 | 3,000 | 49% | 64% | 1,470 | 1,906 | 29% | 17% |
| | Buana 23 F1 | 1 | 1,540 | 81% | 74% | 1,250 | 1,147 | -8% | 52% |
| **Shallot** | Lokananta | 1 | 950 | 13% | 16% | 123 | 154 | 25% | 1% |
| | Sarmo | 3 | 500 | 20% | 16% | 99 | 81 | -12% | 22% |
| **Sweet Corn** | BONANZA F1 | 1 | 700 | 73% | 105% | 509 | 738 | 45% | -1% |
| | NB Super F1 | 6 | 850 | 61% | 81% | 515 | 686 | 32% | 17% |
| | BONANZA NOW F1 | 1 | 700 | 13% | 16% | 92 | 113 | 22% | -5% |
| | Secada 88 F1 | 2 | 900 | 33% | 62% | 294 | 558 | 128% | 56% |
| **Tomato** | Servo F1 | 3 | 2,250 | 42% | 58% | 934 | 1,297 | 39% | -16% |
| | Gustavi F1 | 1 | 2,500 | 24% | 61% | 612 | 1,528 | 150% | 39% |
| **Yard Long Bean** | Kanton Tavi | 1 | 1,250 | 70% | 85% | 870 | 1,068 | 23% | -2% |
| | Guarda | 4 | 1,250 | 37% | 54% | 463 | 679 | 35% | -6% |
| **Choisum** | Shinta | 1 | 1,250 | 52% | 72% | 654 | 905 | 38% | 45% |
| **Chili Curly type** | Tangguh F1 | 2 | 700 | 58% | 68% | 403 | 474 | 34% | 16% |
| **Cabbage** | PM 48 F1 | 8 | 3,000 | 51% | 60% | 1,526 | 1,793 | 19% | 8% |
| **Grand Total** | | **69** | **1,704** | **43%** | **59%** | **695** | **966** | **44%** | **11%** |

# Demoplot Analysis (No Biochar Vs Biochar, Agronomic Aspect)

| PLANTING SEASON 2 | Varietas | No. Of Demos | Potential Yield 500 sqm | NO BIO - % Potential Yield | BIO - % Potential Yield | NO BIO - Yield (kg) 500 sqm | BIO - Yield (kg) 500 sqm | Improvement Yield | Fertilizer Reduction |
|---|---|---|---|---|---|---|---|---|---|
| **Cucumber** | Bandana f1 | 1 | 2,000 | 34% | 83% | 678 | 1,650 | 144% | 59% |
| | Wulandari F1 | 1 | 1,000 | 138% | 193% | 1,380 | 1,925 | 39% | 62% |
| | Erina F1 | 4 | 2,500 | 22% | 41% | 546 | 1,014 | 5% | 25% |
| **Shallot** | Brebes | 2 | 750 | 63% | 63% | 473 | 473 | 0% | 0% |
| | Merdeka F1 | 1 | 650 | 46% | 55% | 299 | 358 | 20% | -2% |
| **Sweet Corn** | NB Super F1 | 1 | 850 | 50% | 50% | 425 | 425 | 0% | 0% |
| | Madu 59 F1 | 1 | 1000 | 108% | 124% | 1,079 | 1,242 | 15% | 1% |
| **Yard Long Bean** | Guarda | 5 | 1,250 | 30% | 52% | 377 | 656 | 47% | -4% |
| **Mung bean** | Vima 1 | 1 | 88 | 57% | 63% | 50 | 55 | 10% | 0% |
| **French Bean** | Maxipro | 1 | 1500 | 21% | 35% | 317 | 519 | 64% | 66% |
| **Choisum** | Shinta | 3 | 1,250 | 14% | 36% | 172 | 453 | 112% | 0% |
| **Green Onion** | Blaze F1 | 1 | 1300 | 38% | 50% | 500 | 644 | 29% | 0% |
| **Grand Total** | | **22** | **1,359** | **41%** | **60%** | **466** | **748** | **41%** | **12%** |

| PLANTING SEASON 3 | Varietas | No. Of Demos | Potential Yield 500 sqm | NO BIO - % Potential Yield | BIO - % Potential Yield | NO BIO - Yield (kg) 500 sqm | BIO - Yield (kg) 500 sqm | Improvement Yield | Fertilizer Reduction |
|---|---|---|---|---|---|---|---|---|---|
| **Bitter Gourd** | Lipa F1 | 1 | 1,750 | 26% | 29% | 448 | 514 | 15% | -34% |
| **Sweet Corn** | Mabes F1 | 1 | 750 | 117% | 175% | 876 | 1,313 | 50% | 1% |
| | Talenta | 1 | 900 | 42% | 42% | 378 | 380 | 1% | 0% |
| **Yard Long Bean** | Guarda | 1 | 1,250 | 34% | 49% | 430 | 608 | 41% | 58% |
| **Grand Total** | | **4** | **1,163** | **55%** | **74%** | **533** | **704** | **27%** | **6%** |